DOCUMENT RESUME

ED 243 613 RC 014 701

AUTHOR	Lavalla, Patrick
TITLE	Handbook, Living Life's Emergencies: A Guide for Home Preparedness.
INSTITUTION	Emergency Response Inst., Tacoma, WA.
REPORT NO	ISBN-0-913724-25-4
PUB DATE	81
NOTE	77p.
AVAILABLE FROM	Survival Education Association, 9035 Golden Givens Road, Tacoma, WA 98445 ($3.00 plus $1.00 postage and handling).
PUB TYPE	Guides - Non-Classroom Use (055)
EDRS PRICE	MF01/PC04 Plus Postage.
DESCRIPTORS	Emergency Programs; *Family Health; Fire Protection; *First Aid; Food; *Natural Disasters; *Nutrition; *Outdoor Education; Safety; School Safety; Water
IDENTIFIERS	Blizzards; *Disaster Planning; Earthquakes; *Emergencies; Floods; Hurricanes; Survival; Tidal Waves; Tornadoes; Tornado Protection

ABSTRACT

Although not intended as a complete manual, the guide gives families a better chance of surviving and recovering from a major emergency by helping them learn what emergencies and disasters could occur in the area, how to prepare for them, what action to take in emergencies, and how to develop emergency skills. The guide explains what supplies to keep on hand and gives procedures for the time after any emergency. It discusses preparedness and procedures for house fires, forest and wildland fires, power outages, lightning, earthquakes, tidal waves, floods, hurricanes, tornadoes, heat waves, and winter storms. The guide also discusses body management in terms of air, shelter, rest, water, and food. It lists general indicators of major body upsets, gives a list of household and automobile first aid supplies, and discusses various injuries (bleeding, wounds, shock, burns, fractures), with a table of signs, symptoms, and treatments. The book discusses the maintenance of good health and hygiene during emergencies, short-term emergency water sources, preparation of water in emergencies, food storage, and emergency menus. In addition to a chart of emergency telephone numbers, the guidebook contains an outline for family emergency planning. (SB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED243613

HANDBOOK, LIVING LIFE'S EMERGENCIES

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Gene Fear

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

RC014701

"LIVING LIFE'S EMERGENCIES" A NATIONAL PROGRAM FOR EMERGENCY PREPAREDNESS

2

EMERGENCY TELEPHONE NUMBERS

Only use telephone for personal family emergencies. During disasters depend upon radio and TV for information. Use phone only if you have a genuine emergency to report. Otherwise you will severely impair needed emergency communications.

Doctors _____

_____

Hospitals _____

_____

Ambulance _____

Poison Control Center _____

Police Department: Local _____

Police Department: County _____

Police Department: State _____

Fire Department _____

Local Emergency Service or
Civil Defense Office _____

Local Health Department _____

Utility Companies _____

_____

_____

Weather Service _____

Local Emergency Broadcast
Radio Station _____

Family Members Business/work
phone numbers _____

_____

_____

Other key relatives
phone numbers _____

_____

DISCLAIMER

This book is not a complete manual for emergency preparedness and survival. It is not meant to replace training and experience. The author, The Emergency Response Institute, and the Survival Education Association take no responsibility for the use of this book or any information contained therein. Endorsement of specific equipment is not implied.

Maintenance of good health, a positive mental attitude, knowledge of emergency/disaster environments, emergency preparedness skills, and a home preparedness program is the responsibility of each individual and family.

Authored By: Patrick Lavalla
Copyright © 1981 by
The Emergency Response Institute

Printed, Published, Distributed by
The Survival Education Association
9035 Golden Given Road
Tacoma, Washington 98445

ISBN 0-913724-25-4

From a text of the same title by Patrick Lavalla and Robert Stoffel, Emergency Response Institute

Illustrations from Defensive Living and Survival Education Teaching Graphics Series, Survival Education Association, 9035 Golden Given Road, Tacoma, Washington 98445.

TABLE OF CONTENTS

Emergency Telephone Numbers ..... Inside Front Cover
Introduction 3
Before a Disaster (What you need to have) 5
House and Forest Fires 7
Power Outages 12
Lightning 13
Tsunamis (Tidal Waves) 15
Floods 16
Hurricanes 18
Tornados 19
Heat Waves 21
Winter Storms 22
After Any Emergency 25
Body Management After the Event 27
Injury Treatment and First Aid 33
Auto and Home First Aid Kits 38
Survival First Aid 41
Hygiene After an Emergency 51
Water Needs and Storage/Purification 54
Food Storage, Menus, and Food Management 60
Emergency Planning 68
Location of Important Papers ..... Inside Back Cover

Remember; it is the things that you allow to happen that create your Distress and Discomfort Situations.
By Gene Fear, Philosopher

WARNING SIGNALS

A STEADY BLAST 3 To 5 Minutes

[redacted]

EMERGENCIES THAT POSE A THREAT TO LIFE
TUNE TO YOUR LOCAL RADIO STATION

STATION	DIAL POSITION	STATION	DIAL POSITION

★ *IF INSTRUCTED TO EVACUATE YOUR AREA BECAUSE OF A THREAT.*

Immediately gather life support needs
and follow radio or voice instructions for safety or
for best protection or travel route to safety.
Be prepared to PATCH UP YOUR BODY
PROTECT YOUR BODY FROM WEATHER
REFUEL YOUR BODY
NAVIGATE YOURSELF TO SAFE AREA

EMERGENCY INSTRUCTIONS

THE ATTACK WARNING SYSTEM

WAVERING TONE 3 To 5 Minutes

ACTUAL ATTACK AGAINST THIS COUNTRY
HAS BEEN DETECTED
TAKE PROTECTIVE ACTION IMMEDIATELY!

FALLOUT SHELTER

✡ *All EBS Tone Controlled Home Alerters will be activated by Local signal from National Warning Alert System primary tone.*

✱ MAY BE SUBSTITUTED WITH A STEADY BLAST IN REMOTE AREAS
LOCAL FIRE STATION OR MOBILE SIRENS

LOCAL AREA RADIO STATIONS WILL ADVISE OF THREAT AND AREA INVOLVED

IN TIME-CRITICAL EMERGENCIES --- SECONDS COUNT -- IT'S YOUR LIFE AT STAKE. SECURE YOUR LIFE SUPPORT NEEDS/ MOVE TO SAFEST LOCATION
TAKE A PORTABLE RADIO / TRUST THE RADIO'S ADVICE

CITIZEN WARNING SIGNALS FOR LIFE THREATENING EMERGENCIES
by Gene Fear | Published by Survival Education Assn. Tacoma Wa.

UNEXPECTED EMERGENCIES DO HAPPEN.

✓ NATURAL DISASTERS
✓ STORMS
✓ ACCIDENTS, DELAYS
✓ MENTAL STRESS, OR
LOSS OF MODERN SERVICES.

BEST COPY AVAILABLE

Introduction

A major emergency affecting a large number of people can occur at anytime and anywhere. During disasters, lives can be saved if people are prepared and know what actions to take.

In a natural disaster, your home may have to be self-sustaining for an indefinite period of time. Your home preparedness capability should be evaluated in terms of:

What Will I Be Without?

- loss of service industries?
- loss of electricity, water, other utilities?
- loss of communications with doctors, hospitals, aid cars?
- loss of roads and transportation?

What Will My Immediate Needs Be?

- where can I get them?
- how can I carry them?

What Can I Do Without For A Few Days?

- a few weeks?

What Threats Might I Encounter?

- how long could I maintain myself and my family without outside assistance?

This handbook contains information that can give yourself and your family a much better chance of surviving and recovering from disaster if you *take the time now* to:

- Know and understand what emergencies and disasters could occur in your area.
- Follow the guidelines contained in this handbook to prepare for emergencies.
- Know what actions to take when emergencies occur.
- Develop emergency skills by taking training courses in first aid, medical self-help, emergency preparedness, and survival.

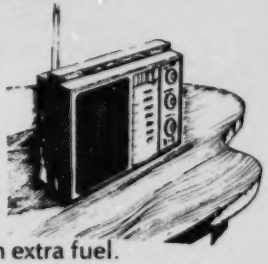
7

Before Any Emergency Or Disaster WHAT YOU NEED TO HAVE ON HAND

A home emergency preparedness kit should include:

- **Phone numbers** you can dial for help. Check your local telephone directory for these emergency numbers and write them down in the spaces on the inside cover of this handbook.
- **Battery-powered radio and extra batteries.** This will enable you to hear weather forecasts and emergency information broadcast by local authorities, even if you are without electricity. Do you know your local Emergency Broadcast Station? A CB Radio (Channel 9) may be a good item to use to radio for help or to receive emergency information.
- **Emergency Food and Water Supply.** Store food that does not require refrigeration or cooking. A minimum of a two week food supply is recommended. You will also need two quarts of water per person per day. (See Food and Water Sections).
- **Special Diets Food Supply.**
- **Emergency Cooking Equipment,** such as a campstove, sterno stoves, barbeque or hibachi. Extra fuel for several weeks.

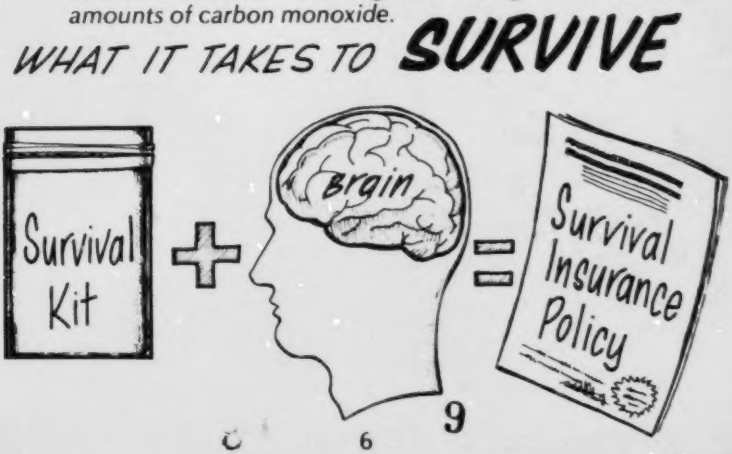
  CAUTION: You must have adequate ventilation when cooking indoors, especially with charcoal.



- **Extra Blankets or Sleeping Bags.**
- **Warm Clothing.**
- **Flashlight and Extra Batteries.**
- **Portable Water Purifier.**
- **Candles and Matches.**
- **One or more camping lanterns,** with extra fuel.
- **First Aid Supplies** (see home first aid section).
- **Infant Supplies and Foods.**
- **Extra Medicine** as may be required by family members.
- **Extra Eye Glasses.**

- **Hygiene and Sanitation Supplies** (see Sanitation Section).
- **Pet Supplies and Food.**
- **Fire-fighting Equipment,** to include an extinguisher, buckets of sand, shovel, ax.
- **Basic Kit of Tools,** to include pipe wrench, pump pliers, hammer, screw drivers, saw, nails, screws, wire.
- **Snow Shovel,** and at least one other type of shovel.
- **Things To Do,** such as books, cards, games, etc.
- **Inventory of Important Papers.**
- Keep an adequate supply of heating fuel on hand and use it sparingly. Your regular supplies may be curtailed by storm conditions. If necessary, conserve fuel by keeping the house cooler than usual or by "closing off" some rooms temporarily. Also have available some kind of *emergency* heating equipment and fuel so you could keep at least one room of your house warm enough to be livable. This could be a camp stove with fuel, or a supply of wood or coal if you have a fireplace. Oil, gas, and electric furnaces depend upon electricity to operate. If electricity fails, you will need emergency heat capabilities.

  CAUTION: Know how to use your emergency heating and lighting equipment safely to prevent fire or dangerous fumes. Use only safety listed equipment. Never introduce a fuel into a unit not designed for that fuel. Proper ventilation is essential. Burning charcoal gives off deadly amounts of carbon monoxide.



House Fires

- **Have smoke and fire detectors installed in several locations. Test and maintain them.**
- **Have several fire extinguishers on hand.**
- **Have a family fire drill and find two exit routes from every bedroom, one inside and one outside.**

These safety measures and survival tips could save lives in case of fire. We should:

- Keep bedroom doors closed at night.
- If a fire is suspected, test the door for heat and determine if smoke is seeping through the edges. If so, do not open the door! Sound alarm and use emergency exits to go out.
- If door is cool and appears safe to open, brace against it (head to one side) and open it slowly. If there is smoke or fire, slam door shut again and get out through other exits.
- If caught in smoke and fumes, keep low where the air is better (heat rises).
- When everyone is out, notify fire department from phone or fire box. (Give complete address and directions.)
- Plan an outdoor meeting place. Never dash back into a burning building to rescue someone who may be outside but out of sight. Don't hesitate to cut a doorway through connecting closets if this will increase escape chances.
- If windows are to be used as an escape route, be sure they are big enough to pass through and that they open easily. If a window is too high from the floor, have a piece of furniture available to climb on. If a window is high off ground, have an escape ladder available and teach the family how to use it.
- There are many cooking hazards in the home. Make sure that ceilings and partitions are not close to source of cooking heat. Keep stove and oven free of grease. Keep curtains away from cooking areas. If there is fire in the oven, keep the door closed. If a grease fire starts while cooking, turn off the burner and cover burning pan with a large flat cover.

If a fire does occur, your home might be saved if you know how to fight fires, act promptly, and have on hand some basic firefighting tools. These should include a garden hose (preferably already connected), a ladder, buckets filled with sand, containers filled with water, and a fire extinguisher. Keep in mind that vaporizing-liquid types of fire extinguishers can produce dangerous fumes when used in small enclosed spaces.

Remember the 3 basic ways to put out a fire:

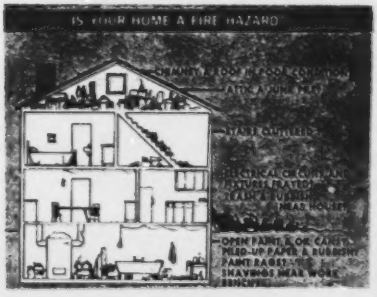
- Take away its fuel.
- Take away its air (smother it).
- Cool it with water or fire-extinguisher chemicals.

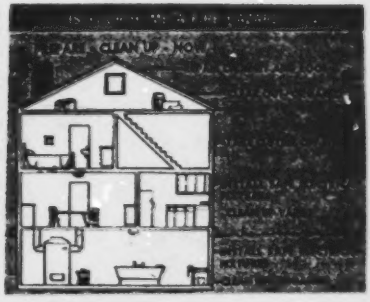
Whichever method you use, it will be most effective if you act immediately, before the fire grows larger, by:

—Getting the burning material out of the house (carry it out, or throw it out of a door or window if you can); or
—Putting out the fire with water, sand, earth or fire-extinguisher chemicals; or
—Smothering the fire with a rug or blanket, preferably wet.

Special types of fires require special methods:

—If it is an *electrical fire,* be sure to shut off the electricity first. Then put out the flames with water or anything else available. If you can't shut off the electricity, don't use water on an electrical fire.
—If it is an *oil or grease fire,* shut off the supply of whatever is burning. Then smother the flames with sand, earth, rugs or other heavy materials. Don't use water.
—If it is a *gas fire,* shut off the gas supply. Then use water, sand or earth to put out whatever is burning.





BEST COPY AVAILABLE

TO PREVENT FIRES IN YOUR HOME

- Store flammable liquids in approved containers in well-ventilated area. Keep on hand only the amount needed. Never use flammable liquids in a garage. Fill and handle only in a well-ventilated area. Do not use flammable liquids for cleaning. Enforce "No Smoking" rules.
- Keep combustibles stored neatly. Such storage should be kept to a minimum. Discard items no longer needed or wanted.
- Keep electrical equipment in good working order. Don't overload circuits. Watch out for frayed cords and poor wiring. All electrical wirings should be installed by an electrician. All electrical outlets should be at least 18 inches above the floor to prevent ignition of flammable vapors.
- Heating equipment, especially any with open flame, furnaces, hot water heaters, etc. should be at least 18 inches above the floor to prevent ignition of flammable vapors that may be present.

FIRE SURVIVAL HINTS AND SAFETY TIPS

Think seriously before staying overnight in a hotel above the 8th floor. Most major fire departments can only reach about 100 feet or to the 8th floor with aerial ladders.

Don't be afraid to say "no" if a rented room appears unsafe. The room cost can be replaced. Can a life?

If a fire fighter searches a room, the bed will be one of the first places he looks.

Baby sitters should be instructed on what to do in case of fire.

When staying in an older building, before going to bed fill the bathtub half full of water. Should fire start, use wet towels to chink the door. The tub also provides water for a blanket to wrap around the body in case escape is necessary.

Housekeeping is as important as other safety items in preventing fires in homes.

If trapped in a building above the 8th floor with no escape available, improvise (sheets, blankets, rope, wire, etc., anything to allow a person to hang on the outside of the building). Tie off to pipes, metal furniture, window frames, sashes, etc. There is a chance this way. If a person jumps, there is little or none.

Where do most home fires start?

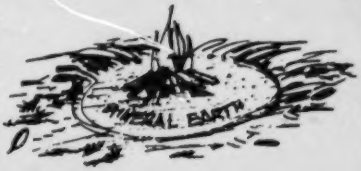
37% Living Room
22% Kitchen
14% Basement
13% Bedrooms
14% All others

Forest And Wildland Fires

Preventing Forest Fires

Everyone can help prevent forest fires by following these rules:

- Never burn trash outside in dry weather on windy days.
- Always have plenty of help, tools, and water nearby.
- Don't burn debris near wooded areas, buildings, or dry fields or grass.
- If a permit is required to burn trash or debris, get one. Then burn only in a metal container or on bare ground.
- When smoking in your car, use the ashtray—don't throw butts or burnt matches out the window. When walking in the woods, grind out butts and matches with your heel.
- At home, keep matches out of the reach of children. They accidentally set many forest and wildland fires.
- Be careful about campfires or warming fires in the woods. Before starting a fire, clear a space -- down to bare earth — 10 feet in diameter. Dig a hole in the center and build your fire there, and keep it small. Never build it against trees or logs, or near brush.
- Before you leave your fire, stir it while you pour water on it. Soak the wood all over, and the earth around the fire. Make sure the embers and sparks are *dead out,* by feeling them with your hand.



- If you use equipment or machinery in the woods (such as tractors, trucks, or power saws), make sure you have spark arrestors on engines, and be careful when refueling.
- Report promptly any fires or dangerous conditions you see, and any evidence of suspected incendiarism (deliberate fire-setting).

IMPORTANT: Firefighting is strenuous work. Do not engage in it unless you are in very good physical condition.

Be Ready to Cope With Forest Fires

If your home or community is likely to be threatened by a forest fire, there are advance actions you can take to protect yourself, your family, and your community.

- Take a free course in fighting forest fires. For information on this, contact your local civil preparedness agency, County Agricultural Extension Agent, or the Forest Service, U.S. Department of Agriculture, Washington, D.C. 20250.
- Make sure your own property is clear of material that may burn, especially brush and debris close to your home or other structures.
- Keep on hand, ready for quick use, hoses and other firefighting equipment you may need in case of a home fire or a nearby forest fire.
- Plan (write down on paper) where you would construct your "fire breaks" and what other individual actions you would take if a forest fire should threaten your property.
- Follow the rules given in this handbook regarding fire prevention at home, and prevention of forest fires.

If a Forest Fire Threatens Your Home or Community

- If your home or property is threatened, summon aid *before* you start to fight the fire; *then* take the individual actions you had planned in advance. When help arrives, let professional or trained firefighters take charge (unless you are one).
- If time permits and this is required, clear away all flammable vegetation within 30 feet of your home. Close all windows (cover them if possible). Remove from near windows and other openings any interior furnishings that may catch fire because of heat coming from outside. Secure livestock and pets.
- If a forest fire occurs in your community, keep posted on it by means of radio or television. Follow the advice or instructions of your local government. If you are instructed to evacuate your home, do so at once, and follow prescribed routes. Don't try to take "shortcuts."
- If you are helping to fight the fire, do so under the supervision of a trained firefighter. Follow his instructions, so as not to get hurt and also to make your efforts most effective. Keep informed — know where the fire is in relation to you, know your escape routes, and maintain communication with your supervisor. Keep safe, by remembering that forest fires are dangerous and not always predictable.

Power Outages

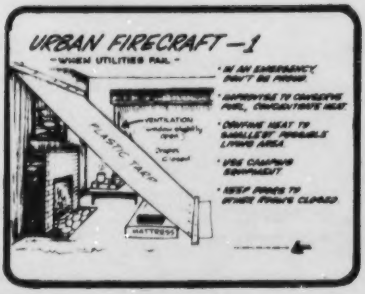
Most power outages are short-term, but the possibility of extended outage exists. The longer it lasts, the more self-reliant a person must be.

After the electricity goes off:

- Assess the situation, looking around the neighborhood for flash fires, downed power lines, sparks, or anything immediately dangerous.
- In your house, flick off switches, including furnace and major appliances except one light. When power comes back on, the initial power surge with all lines on full power load could blow the circuit again.
- The freezer and refrigerator (and other appliances) should be unplugged to prevent motor damage when power returns. To keep the freezer contents from thawing, wrap the unit with blankets, newspapers, or other insulating material. Before removing food, make a list of items desired and open the door quickly and only when absolutely necessary.
- Seal off as many rooms as possible. Heat sources will be more effective in smaller spaces.
- A burning fireplace can make the house colder by drawing cold from outside unless a room is well insulated or the fireplace is enclosed in a smaller makeshift room-like structure. Make a lean-to in front of the fireplace with sheets, blankets, tarps, or anything else available.
- A well-insulated home protects against the elements. Stuff rags, paper or other materials into cracks, underneath drafty doors, etc.

- *NOTE: Burning charcoal, coal, or camp stove fuels in poorly ventilated, enclosed areas is extremely dangerous.*

- **Use Your Home Emergency Preparedness Kit**



NATURE'S WORST KILLER

In an average year, lightning kills more people than all other natural disasters combined.

Lightning

LIGHTNING SAFETY RULES

- Stay indoors if possible during thunderstorms. Do not go outside unless absolutely necessary.
- Stay away from open doors and windows, fireplaces, radiators, stoves, metal pipes, sinks, and plug-in electrical appliances.
- Do not use plug-in electrical equipment such as hair dryers, electric toothbrushes, or electric razors during a storm.
- Do not use the telephone during the storm — lightning may strike telephone lines outside.
- Do not take laundry from clotheslines.
- Do not work on fences, telephone, power lines, pipelines, or structural steel fabrication.
- Do not use metal objects such as fishing rods or golf clubs. Golfers wearing cleated shoes are particularly good lightning rods.
- Do not handle flammable materials in open containers.
- Stop tractor work, especially if tractor is pulling metal equipment, and dismount. Tractors and other implements in metallic contact with ground are often struck by lightning.
- Get out of water and off small boats.
- Stay in automobile if traveling. Automobiles offer excellent lightning protection.
- Seek shelter in buildings. If no buildings are available, the best protection is a cave, ditch, canyon, or under head-high clumps of trees in open forest glades.
- When there is no shelter, avoid the highest point in the area. If only isolated trees are nearby, best protection is obtained by crouching, keeping twice as far from isolated trees as the tallest trees are high.
- Avoid hilltops, open spaces, wire fences, metal clotheslines, exposed sheds, and electrically conductive elevated objects.
- When electrical charge is felt — a person's hair will stand on end or skin will tingle — lightning may be about to strike. Drop to the ground immediately.

Earthquakes

Actions to take to minimize property damage and injury:

- Make certain your home conforms to building codes and is earthquake resistant in construction.
- Bolt down all gas appliances
- Place large and heavy objects on low shelves.
- Brace or securely anchor all high or top heavy objects.
- Securely anchor overhead fixtures.
- Do not stack glass or China on shelves — use drawers when possible.
- Remove all structural hazards that might fall or collapse during an Earthquake.
- Bolt pictures and mirrors to the wall.
- Draw drapes across windows.

DURING THE SHAKING:

- Remain calm. The motion is frightening, but unless it shakes something down on top of people, it is harmless. The earth does not yawn open, gulp down a neighborhood, and slam shut. Keep calm and ride it out.
- If caught indoors, stay indoors. Take cover under a desk, table, or bench, or in a doorway, hall and against inside walls. Stay away from glass.
- Do not use candles, matches, or other open flames, either during or after the tremor. Douse all fires.
- If caught outside, move away from buildings and utility wires. Once in the open, stay there until shaking stops.
- Do not run through or near buildings. Greatest danger from falling debris is just outside doorways and close to outer walls.
- If in a moving car, stop as quickly as safety permits but stay in the vehicle. A car is an excellent seismometer and will jiggle fearsomely on its springs during the earthquake. It is also a good place to stay until shaking stops. Do not stop on or underneath a bridge or overpass. Do not stop in areas where buildings can fall on you.

AFTER THE SHAKING:

- Check utilities, but do not turn them on. Earth movement may have cracked water, gas, and electrical conduits.
- If gas is detected, open windows and shut off main valve. Leave the building and report gas leakage to authorities. Do not re-enter the house until a utility official says it is safe.
- If water pipes are damaged, shut off supply at main valve.
- If electrical wiring is shorting out, shut off current at main meter box.
- Turn on radio or television (if conditions permit) to get latest emergency bulletins.
- Stay off the telephone except to report an emergency.
- Do not go sight-seeing. You will hamper emergency work.
- Stay out of severely damaged buildings: aftershocks can shake them down.

Tsunamis (Tidal Waves)

- Not all earthquakes cause tidal waves, but many will. If you are near the ocean or tidal inlet after an earthquake be alert for tidal waves. Move inland.
- A warning means a tsunamis is coming. Do not go down to the beach to watch for one. If you are close enough to see the wave coming you may be too close to escape.
- A noticeable rise or fall of coastal water indicates an approaching tsunamis. Leave the area immediately.

Floods

BEFORE THE FLOOD:

- You should know what a river height forecast means in terms to the height of your own property.
- Keep sandbags, plywood, plastic sheeting, and lumber on hand if flooding is imminent or if a dwelling is near a drainage.
- Install check valves in sewer traps so flood water cannot back up in sewer drains.
- Arrange auxiliary electrical supplies for hospitals and other operations critically affected by power failure.
- Keep first aid supplies on hand.
- Keep automobile fueled; if electrical power is cut off, filling stations may not be able to operate pumps for several days.
- Keep a stock of food which requires little cooking and no refrigeration; electric power may be interrupted.
- Keep a portable radio, emergency cooking equipment, lights, and flashlights in working order.
- Never camp directly in dry stream beds; always camp above high water marks.
- Be aware that swollen waters can cut off return route. (Be aware of continued flood producing weather. Listen to weather reports.)

WHEN A FLOOD WARNING IS RECEIVED:

- If you're told officially to evacuate, follow directions.
- Store drinking water in clean bathtubs and other containers. Water service may be interrupted.
- If forced to leave home and time permits, essential items should be moved to safe ground; fill tanks to keep them from floating away; grease immovable machinery.
- Make provisions for safe emergency shelter.
- Move to safe area before flood water cuts off access.

DURING THE FLOOD:

- Always seek higher ground, staying out of dry creek or river beds.
- Avoid areas subject to sudden flooding.
- Do not attempt to cross a flowing stream where water is above knees.
- Do not attempt to drive over a flooded road — one can be stranded and trapped.
- If trapped, keep calm. Get to highest, safest location and stay there. Never try to swim to safety in swollen flood waters. Signal distress location.
- If a person is in the water, make every effort to throw something that will float. Enter water only as a last resort.

AFTER THE FLOOD:

- Do not use fresh food that has come in contact with flood waters.
- Test drinking water for potability; wells should be pumped out and water tested before drinking. Consider all water unsafe — boil or use chemical purification.
- Seek necessary medical care at nearest hospital. Food, clothing, shelter, and first aid are available at Red Cross shelters.
- Do not visit a disaster area. Crowds hamper rescue and other emergency operations.
- Do not use the telephone unless you have a genuine emergency to report.
- Do not handle live electrical equipment in wet areas; check and dry electrical equipment before returning to service.
- Use flashlights, not lanterns, or torches, to examine buildings; flammables may be inside.
- Report broken utility lines to appropriate authorities.

20

Hurricanes

BEFORE THE HURRICANE

- Enter each hurricane season prepared. Every June through November, recheck supply of boards, tools, batteries, nonperishable foods, and other equipment which will be needed when a hurricane strikes.
- When the first tropical cyclone advisory is heard, listen for further messages. This will help prepare individuals for a hurricane emergency well in advance of watches and warnings.
- When an area is covered by a hurricane watch, continue normal activities but stay tuned for National Weather Service advisories. If danger materializes, a hurricane warning will be issued. Meanwhile, keep alert and ignore rumors.
- When the area receives a hurricane warning, plan carefully before the storm arrives and avoid last-minute hurry which might leave individuals marooned or unprepared.

DURING THE HURRICANE

- Keep calm until the emergency has ended.
- Leave low-lying areas that may be swept by high tides or storm waves.
- Mobile homes are particularly vulnerable to overturning during strong winds. Damage can be minimized by securing mobile homes with heavy cables anchored in concrete footing. Find more substantial shelter.
- Moor boats securely before the storm arrives or move them to a designated safe area. When the boat is moored, leave it. Do not return while wind and waves are up.
- Board up windows or protect them with storm shutters or tape. Protect small windows from wind-driven debris. Larger windows must be protected from wind pressure breakage. Keep windows a little ajar in order to equalize pressure.
- Secure outdoor objects that might be blown away or uprooted. Garbage cans, garden tools, toys, signs, porch furniture, and other harmless items become destructive missiles in hurricane winds. Anchor or store them inside before the storm strikes.

AFTER THE HURRICANE

- Use your Home Emergency Preparedness Kit.
- Review "After Any Emergency or Disaster Section."

Tornados

REMEMBER

TORNADO WATCH — means tornadoes are expected to develop.

TORNADO WARNING — means a tornado has actually been sighted.

TORNADO SAFETY RULES

WHEN A TORNADO WARNING HAS BEEN ISSUED:

Seek inside shelter, preferably in a tornado cellar, underground excavation, or steel-framed or reinforced concrete building of substantial construction.

STAY AWAY FROM WINDOWS!!

IN CITIES OR TOWNS

IN OFFICE BUILDINGS — stand in an interior hallway on a lower floor, preferably in basement.

IN FACTORIES — on receiving a tornado warning, post a lookout. Workers should move quickly to the section of plant offering greatest protection.

IN HOMES — Generally, tornados travel from S.W. to N.E. The S.W. corner of a basement is safest. Seek shelter under a sturdy workbench or heavy table if possible. In a home with no basement, take cover under heavy furniture in the center part of the house. Keep some windows open (to equalize pressure), but stay away from them because they may shatter.

MOBILE HOMES — are particularly vulnerable to strong winds. Trailer parks should have a community shelter. Appoint a community leader responsible for constant radio monitoring during threatening weather or during watch periods.

SHOPPING CENTERS — Go to designated shelter areas.

IN SCHOOLS

Whenever possible, go to an interior hallway on the lowest floor; **AVOID AUDITORIUMS AND GYMNASIUMS** or other structures with wide freespan roofs.

If a building is not reinforced construction, go quickly to a nearby reinforced building or to a ravine or open ditch and lie flat.

A TORNADO
IS A VIOLENTLY ROTATING COLUMN OF AIR
WITH WIND SPEEDS UP TO 200 M.P.H.
EVEN STRONG BUILDINGS CAN BE SHATTERED.
BUT, PROTECTION* IS AVAILABLE.
*Knowledge is your best protection.

IN OPEN COUNTRY

If you are driving or are on foot, move away from a tornado's path at a right angle. If there is no time to escape, lie flat in the nearest depression, such as a ditch or ravine and protect head with arms. DO NOT stay in a vehicle, it is one of the most dangerous places to be.

KEEP LISTENING

Radio and television stations will broadcast latest tornado advisory information. **CALL WEATHER BUREAU ONLY TO REPORT A TORNADO.**

Tornado protection is not solely up to the individual. Efforts are made at many levels to provide as much protection as possible. Everyone should know what to do to survive before, during, and after a tornado. School plans should be made well in advance to insure student's survival.

City and county governments are responsible for developing community tornado disaster plans. Local, state, and federal civil preparedness organizations contribute to development of plans and respond to the disaster once it has taken place. Much effort is directed to prediction and warning programs.

AFTER A TORNADO

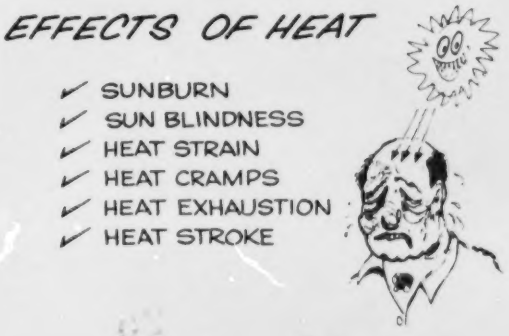
- Use your "Home Emergency Preparedness Kit."
- Review "After Any Emergency or Disaster Section."

Heat Wave

HEAT WAVE SAFETY RULES:

- Slow down. Your body can't do its best in high temperatures and humidities, and might do its worst.
- Heed your body's early warnings that heat syndrome is on the way. Reduce your level of activity immediately and get to a cooler environment.
- Dress for summer. Lightweight, light-colored clothing reflects heat and sunlight, and helps your thermoregulatory system maintain normal body temperature.
- Put less fuel on your inner fires. Foods (like proteins) that increase metabolic heat production also increase water loss.
- Don't dry out. Heat wave weather can wring you out before you know it. Drink plenty of water while the hot spell lasts.
- Stay salty. Unless you're on a salt-restricted diet, take an occasional salt tablet or some salt solution when you've worked up a sweat.
- Avoid thermal shock. Acclimatize yourself gradually to warmer weather. Treat yourself extra gently for those first critical two or three hot days.
- Vary your thermal environment. Physical stress increases with exposure time in heat wave weather. Try to get out of the heat for at least a few hours each day. If you can't do this at home, drop in on a cool store, restaurant, or theater — anything to keep your exposure time down.
- Don't get too much sun. Sunburn makes the job of heat dissipation that much more difficult.

Review the section on "Body Upsets That Can Occur In A Hot Environment." Know how to prevent and treat heat Injuries.



Winter Storms

SAFETY TIPS FOR WINTER STORMS

Winter storms in the form of blizzards, heavy snows, ice storms, freezing rain, or sleet can be a serious hazard to people in many parts of the country. The first line of protection is to KEEP POSTED ON WEATHER CONDITIONS in the surrounding area through television, radio, and newspapers.

FORECASTS AND WARNINGS

A few hours of warning of a storm can be the key to avoiding being caught in it, or at least to be better prepared to cope with it. To take full advantage of weather forecasts and warnings, learn and understand terms commonly used:

- A *heavy snow warning* usually means an expected snowfall of 4 inches or more in a 12-hour period, or 6 inches or more in a 24-hour period. Warnings of *snow flurries, snow squalls,* or *blowing* and *drifting snow* are important mainly because visibility may be reduced and roads may become slippery or blocked.
- A *blizzard* is the most dangerous of all winter storms. It combines cold air, heavy snow, and strong winds that blow the snow about and may reduce visibility to only a few yards. A *blizzard warning* is issued when the Weather Service expects considerable snow and winds of 35 miles per hour or more. A *severe blizzard warning* means that a very heavy snowfall is expected, with winds of at least 45 miles an hour and temperatures of 10 degrees or lower.
- *Freezing rain* or *freezing drizzle* is forecast when expected rain is likely to freeze as soon as it strikes the ground, putting a coating of ice or glaze on roads and everything else that is exposed. If a substantial layer of ice is expected to accumulate from the freezing rain, an *ice storm* is forecast.
- Sleet is small particles of ice, usually mixed with rain. If enough sleet accumulates on the ground, it will make the roads slippery.

IN THE CITY...

DURING COLD, STORMY WEATHER EXTREMES

EXPECT TO LOSE

- ✓ *Transportation*
- ✓ *Factories and jobs*
- ✓ *Schools*
- ✓ *Normal supply lines*
- ✓ *Electricity and communications lines*

25

TRAVEL

TRAVEL ONLY IF NECESSARY. Avoid all unnecessary trips. If you must travel, use public transportation if possible. However, if you are forced to use your automobile for a trip of any distance, take these precautions.

- Make sure your car is in good condition, properly serviced, and equipped with chains or snow tires.
- Take another person with you if possible.
- Maintain a full tank of gas.
- Have emergency "winter storm supplies" in the car, such as a container of sand, shovel, windshield scraper, tow chain, or rope, flashlight, and blankets or sleeping bags. It also is good to have with you heavy gloves or mittens, overshoes, extra woolen socks, and winter headgear to cover your head and face.
- Travel by daylight and use major highways if you can. Keep the car radio turned on for weather information and advice.
- Drive with all possible caution. Don't try to save time by traveling faster than road and weather conditions permit.
- Don't be daring or foolhardy. Stop, turn back, or seek help if conditions threaten that may test your ability or endurance, rather than risk being stalled, lost, or isolated. If you are caught in a *blizzard,* seek refuge immediately.

KEEP CALM IF YOU GET IN TROUBLE. If your car breaks down during a storm, or if you become stalled or lost, don't panic. Think the problem through, decide what's the safest and best thing to do, and then do it slowly and carefully. If you are on a well-traveled road, show a trouble signal. Set your directional lights to flashing, raise the hood of your car, or hang a cloth from the radio aerial or a car window. Then stay in your car and wait for help to arrive. If you run the engine to keep warm, remember to open a window, on the downwind side of the car, enough to provide ventilation and protect you from carbon monoxide poisoning.

Wherever you are, if there is no house or other source of help in sight, do not leave your car to search for assistance, as you may become confused and get lost.

You will almost always have something for shelter. Think, and improvise.

ISOLATION

BE PREPARED FOR ISOLATION AT HOME. If you live in a rural area, make sure you could survive at home for a week or two in case a storm isolated you and made it impossible for you to leave.

SEE HOME PREPAREDNESS EQUIPMENT SECTION

EFFECTS OF COLD

- ✓ SNOW BLINDNESS
- ✓ LOSS OF DEXTERITY
- ✓ FROST NIP
- ✓ FROST BITE
- ✓ HYPOTHERMIA

OVEREXERTION

Stay indoors unless you are in top physical condition.

AVOID OVEREXERTION. Every winter many unnecessary deaths occur because people — especially older persons, but younger ones as well — engage in more strenuous physical activity than their bodies can stand. Cold weather itself, *without* any physical exertion, puts an extra strain on your heart. If you add to this physical exercise, especially exercise that you are not accustomed to — such as shoveling snow, pushing an automobile, or even walking fast or far — you are risking a heart attack, a stroke, or damage to your body. In winter weather, and especially in winter storms, be aware of this danger, and avoid overexertion.

Review the section on "Body Upsets That Can Occur In A Cold Environment." Know how to prevent and treat cold injuries.

After Any Emergency Or Disaster

- Remain in shelters and other safe locations until all threat has passed.
- Check for injuries and apply self or first aid.
- If possible, put out any fires that may have started.
- Use caution in entering any building or structure. They may have been damaged or weakened, and can collapse with no warning. Live electrical wires may be exposed.
- Do not use any flames (matches, lanterns, candles, torches, cigarettes, etc.). There could be leaking gas lines. For light use only battery powered flashlights, spotlights.
- Check for gas leaks by smell — if you detect a leak:
  - — open all windows.
  - — leave building/house immediately.
  - — turn off main gas valve at meter.
  - — notify authorities (gas company, police or fire department).
  - — do not re-enter until it is safe.
- Stay away from fallen or damaged electrical wires.
- Report broken sewer or water mains. Do not use toilets or plumbing until you know the sewer lines are functional.
- Stay tuned to Radio or TV for emergency information or instructions.
- Do not use your phone unless you have a genuine emergency to report. You will severely impair needed emergency communications.
- Stay away from disaster areas. Sightseeing interferes with rescue and emergency work.
- Do not pass on rumors or exaggerated reports.
- Do not travel on streets unless absolutely necessary. You may interfere with emergency vehicles.
- Remember your pre-arranged plans as to how to contact and meet family members. Follow that plan.
- Keep pets indoors or on a leash, otherwise they may run away, frightened by the disaster event.
- Use refrigerated foods first, if there is no power. They will spoil within several days.

- Stay away from any electrical appliances that are wet. Turn off the main electrical switch before unplugging any appliances.
- Maintain body temperature by regulating clothing. In cold, wet environments keep clothing dry.
- Drink plenty of water. If water is scarce, do not eat. Eating without plenty of water will contribute to dehydration.
- **Use your Home Emergency Preparedness Kit. Keep items handy in case you may have to evacuate.**

DEFENSIVE LIVING...

IS MAKING SURE YOU CAN TAKE CARE OF YOURSELF ANYWHERE WITHOUT RELYING UPON OTHERS FOR ASSISTANCE.

Body Management, The Key To Survival

What is Survival?

Traditional definitions of survival imply primitive conditions, living off the land, or battling the elements to live through some precarious predicament in the wilderness. Depending on the perspective that individuals have, or the life activities sphere in which they operate, survival means different things to different people.

A survival situation is one in which an individual's very existence is threatened. Some kind of action is necessary to alleviate a threat to life. To survive is to continue existing, to live in spite of some event or adverse set of circumstances. In brief, survival is simply living a minute longer by any improvised means possible. The key term here is improvise. Seldom will an individual enter into a life threatening experience with no material resources.

The ability to survive is infinitely more complex than merely being able to "live off the land". Statistics prove that nearly all survival situations today are short term (72 hours or less). The much publicized long term survival experiences make up fewer than five percent of all incidents. In establishing an effective, rational response to any survival situation, it is imperative to realize that actions and needs must be prioritized. Preconceived ideas about survival can precipitate incorrect priorities and actions in the initial moments of stress. These false ideas may lead inexorably to a fatal end. First hand accounts and interviews substantiate the fact that the decisions made in the first hours or minutes of an emergency have a great bearing on the ultimate outcome.

It is essential to understand the human body; not entirely as a physician understands it, but how it reacts to or is affected by environmental stress. In short, a working knowledge of how to properly manage your body in an emergency environment is the key to survival. Proper body management is a skill in maintenance and control of your own essential (limited) body resources and problem solving capabilities. If mismanaged, body upsets will directly affect a person's ability to exist in any environment for any period of time.

Traditional survival skills have a definite place, but they must be tempered with an understanding of how humans function under mental, as well as environmental stress. An understanding of why the necessities of life must be prioritized can be gained by polling

the multitudes of "survival experts" around the country. Most of these authorities express conflicting views as to what the priorities of life should be in a genuine survival emergency. Who is to say which authority is right? Every incident is different just as every individual who might be involved is different. However, the necessities of life do not change, and an analysis and understanding of their priority should always outline a general course of action.

Probably the greatest obstacle an individual will have to overcome is mental attitude. Since survival is a nearly 100 percent psychological challenge, the brain becomes the individual's most important tool. Recognizing the body's needs and acquiring those needs will always require an initial thought process based upon previous experience and education.

People live, work and play in a comfort zone. Just as people differ, so do comfort zones and their limits. All people are unique in their abilities. Since people are creatures of habit, and the technology they have created takes much of the unexpected out of their lives, most rarely go outside of their comfort zones. Experimental programs in high risk and challenge activities have proved conclusively that people who operate on the outskirts of their comfort zones and continually push on those limits, react better in the emergency environment. Under repeated stress situations, people learn to make more and more effective adjustments. By contrast, the typical emergency situation results in disorganized and frequently shock-like behavior. Unknown factors during any emergency will be numerous and variable, factors that fall outside of the comfort zone. Some compound a situation. At the same time, others are counteracting it. Rational, coherent thinking which recalls similar situations or circumstances from past education or experience will, in most cases, be the most effective method of gaining control of the situation.

Modern technology has accustomed people to light switch conveniences that eliminate thirst, hunger, cold, heat and, in most cases, fear. In an unexpected survival situation, confidence and self-reliance will play a key role in determining the ultimate outcome of that experience. Unfortunately, people are not only dependent upon their technology, but are products of a culture which has advanced beyond the necessity of being self-reliant on a daily basis. In short, people are dependent on their technology. Self-reliance is developed through actual experience and dependence on one's self for every day needs. There is no substitute for actually having performed a task which is designed to save lives.

The Necessities of Life

What does it actually take for a human being to stay alive for an indefinite period of time? Typical answers might include clothes, a house, a car and three meals a day. However, it is obvious that several thousand years ago humans did not have these conveniences, and still survived. By listing the necessities of life and asking the questions, how long can a human live without each item, it is then possible to prioritize these necessities in order of importance. The time factors involved with this type of analysis should be in terms of minutes, hours, days and weeks. Although this approach may seem rather elementary, it will provide a foundation for good judgement when dealing with all life threatening emergencies.

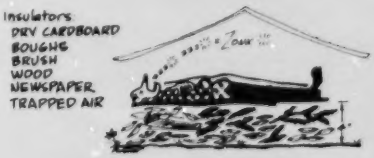
Air

In considering the basic body functions, breathing is essential to maintain life on a minute-by-minute basis. Therefore, air (specifically its life sustaining component, oxygen) is the first priority on the list. The average survival time without air ranges from three to five minutes.

Shelter

GOAL — Maintain body temperature of 98.6°F by regulating clothing.

Inherent with a major portion of survival situations is having to cope with mother nature and inclement weather. Since the human being is designed to live naked only in areas where temperatures are very close to that of the body, environments outside this realm posemany and varied body protection problems. Anything that protects the body can be called shelter. Clothing is shelter in close proximity to the body. The problem is to provide adequate shelter for a specific environmental situation. There are temperature extremes in the United States where inadequate shelter could cut survival time to a few short hours. In some cases, it could even be less than one hour. With this in mind, shelter is the second priority on the list. Fire and warmth can also be considered under shelter because, by definition, they protect the body in a cold environment.

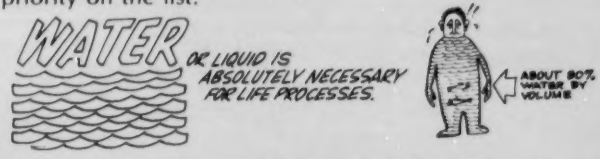


Rest

GOAL — Adequate physical and mental rest is important during emergencies.

As already mentioned, energy levels within the body are vitally important when looking at the ability to cope with any given situation. There is a good possibility that it may not be possible to renew or add to energy levels during an emergency. Therefore, it is imperative to conserve what is already present in the body. One of the most efficient ways of doing this is through adequate and prudent rest. The human body is a wonderful machine which is capable of doing many things if provided with proper care and maintenance. Proper and timely periods of rest in stress situations conserves energy for future use, and rids the body's tissues of CO_2, lactic acid and other body wastes. Taking a short time for rest will also provide time for reflection and analysis of the situation. Mental rest is just as important as physical rest, if not more so. Extreme stress periods (both physical and mental) with no rest can cut survival time to as little as 30 hours. With this in mind, rest is the third priority on the list.

Water



GOAL — Attempt to maintain an intake of 2 quarts of water per day. More will be necessary if physical activity is increased.

It is generally accepted that water and its associated problems, hypohydration and potable condition, are among the most pressing in any survival situation. The body is comprised of approximately 2/3 water which is stored within the tissues, circulatory system and internal organs. Water is essential for body temperature regulation, waste elimination and digestion of food. While at rest with no activities, the body utilizes approximately two quarts of water a day merely to carry on normal body functions. Consumption of any amounts less than this will result in gradual hypohydration. Activity of any kind drastically increases the body requirements for water. Therefore, it is not the water that should be rationed, but the sweat and activity. A 2.5 percent water deficit can occur in a few hours. This can result in a 25 percent loss of efficiency. Extreme conditions without water could cut survival time to three days or less if prudent methods of water conservation are not used. Water, then, is number four on the list of priorities for maintaining human life.

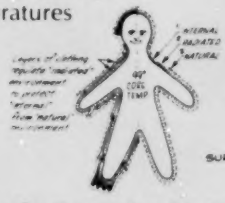
Food

GOAL — Maintain adequate diet during emergencies and disasters.

Energy levels within the body play an important role in warmth and performance. It is a common fact that high energy snacks provide additional calories for heat production as well as movement. Although food would play a minor role under most circumstances, cold environments require many calories to maintain normal body temperature. As was mentioned before, conservation of the energy levels already in the body is one of the most important factors to keep in mind.

Necessities of Life in Priority Order

Requirement	Survival Time if not Fulfilled
1. Positive mental attitude	Depends entirely on you
2. Oxygen in air	3 to 6 minutes
3. Body shelter from extreme temperatures	3 to 4 hours
4. Rest	30 hours in extremes (mental as well as physical)
5. Water	3 days in extremes
6. Food	3 weeks or more



SURVIVAL ENVIRONMENTS

Major Body Enemies in Order of Importance

The Enemy	How it Threatens
1. Your mind	Attitude, imagination, fear, panic
2. Temperature	Body core temperature must be maintained within a narrow 12-degree range for effective, rational behavior
3. Injury	May affect mobility, coordination, and ability for self-help
4. Disease or infection	Constant threat, normally held in check by the body's defense mechanisms

General Indicators of Major Body Upsets

Cold Indicators

Self Analysis

Symptom	Significance
Mild shivering, mild skin pain.	Skin temperature lowering (body is losing heat faster than it is being produced).
Involuntary shivering, numbness, loss of dexterity, inability to move muscles.	Immediate action must be taken.

Observed in Others

Symptom	Significance
Mild shivering, hands in pockets, arms and legs held close together.	Body losing heat faster than it is producing it, and individual is unconsciously trying to conserve.
Clumsiness, general loss of coordination.	Core temperature beginning to drop.
Withdrawal from activities, poor articulation. Whitish or bluish color in ears, nose, hands, and feet.	Immediate action is necessary to rewarm individual.
Poor judgment, possible hallucinations.	Reaching critical temperature of body core.
White spots on skin.	Indication of frostbite.

Heat Indicators

Self Analysis

Symptom	Significance
Thirst, discomfort, easy fatigue.	Not acclimatized. Start of dehydration.
Extremely uncomfortable, sweating.	Body having trouble dissipating heat.
Muscle efficiency and capability slows down.	Body not coping with heat gain.
Excessive thirst.	Dehydration.
Painful voluntary muscle spasms.	Cramps due to chemical imbalance in blood and tissues.
Intense, frequent nausea.	Dehydration.

Observed in Others

Symptom	Significance
Pinkish to red skin.	Possible sunburn.
Sweat stains on clothing.	Losing too much water through perspiration.
Increased fatigue — frequent stops for rest.	Body not coping with heat.
Withdrawal from group, lethargic movements, possible hallucinations.	Dehydration. Body temperature rising above normal. Possibly close to critical temperatures.

Salt or Chemical Deficiency Indicators

Symptom	Significance
Cramps in major muscles, fatigue, intense weakness, headache, irritability.	Salt output has exceeded intake.

Dehydration Indicators

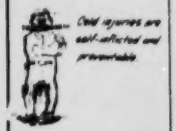
Symptom	Significance
Mouth	Dry, parched.
Headache	Usually an early sign of dehydration.
Skin	Slow to return to normal when pinched or pulled.
Urine	Dark, another early dehydration sign.
Thirst — may be intense.	Thirst alone is not a strong enough indicator to prevent dehydration.
Irritability, fatigue, nausea.	Could indicate other difficulties, but always accompanies dehydration.
Blurred eyesight, impaired judgment, loss of coordination, hallucinations.	Advanced stages of dehydration.

Body Upsets That Can Occur In Cold Environments.

Body Upset	Predisposing Factors	Signs and Symptoms	Prevention	Treatment
Hypohydration (dehydration) A major problem in cold environments. Inhibits the body's ability to produce heat—contributes significantly to hypothermia.	Cold environments inhibit thirst sensations. (See same topic in heat section.)	See same topic in heat section.	Adequate fluid intake. (See same topic in heat section.)	Drink water. (See same topic in heat section.)
Hypothermia A lowering of the body core temperature caused by the body losing more heat than it can produce.	Common in wet, windy, cool conditions. Inadequate clothing, or clothing becoming wet. Fatigue or exhaustion. Inadequate food and water intake (hypothermia). Immersion in cold water.	If you feel cold, your body is losing heat. Look for shivering, poor coordination, poor reflexes, stumbling, thickness of speech, careless attitude, irrationality, memory lapses, easily fatigued, lack of enthusiasm, or poor judgement. Blueness of skin, dilation of pupils, decreased heart and respiratory rate, weak or irregular pulse. Watch for a decrease in shivering, followed by rigidity of muscles.	Proper clothing, stay dry, wear a hat, drink warm liquids, seek shelter during storms. Check yourself and others for symptoms. Work slow—do not sweat. Take adequate food, plenty of water and rest.	Remove wet clothing and provide insulation to stop heat loss. Shelter from the elements. Keep body moving. Take warm fluids, if conscious. Breathe warm oxygen. Provide flesh to flesh contact or other external heat source. Gentle evacuation. (No alcohol.)
Frostnip Superficial freezing of skin tissue.	 Skin exposed to cold or cold/windy conditions.	A sudden blanching (whitening) of the skin, usually on the ears, fingertips, tips of toes, nose, cheeks, or chin.	Use the 'Buddy System'. Constant personal vigilance for signs. Wear adequate clothing.	Rewarming the affected part by a warm hand, warm stomach, or armpit. Blow warm air on the affected part.
Frostbite of the lungs	Heavy breathing in a cold air environment.	Breathing discomfort, coughing, asthmatic type reactions, coughing up blood.	Pre-warm the air, by breathing through hoods, masks, cloth. Humidify the living environment. Eliminate smoking.	Warm breathing environment.

BEST COPY AVAILABLE

Body Upsets That Can Occur In Cold Environments.

Body Upset	Predisposing Factors	Signs and Symptoms	Prevention	Treatment
Frostbite Actual skin tissue damage (freezing) by exposure to intense cold. When skin tissue is chilled below freezing, —capillaries constrict, become damaged, circulation is inhibited —ice crystals begin to grow between the individual cells	Skin exposed to cold, or cold/windy conditions. Damage occurs from ice crystals drawing off water from the cells: the cells dehydrate. Cell injury is also caused by the disruption of nutrients, waste elimination, and oxygen intake.	Superficial frostbite—skin is white, waxy in appearance; numbness; resilience to touch. Deep frostbite (freezing)—muscles, bone, tendons, are frozen; affected part becomes rigid, waxy colored, cold to the touch, painless when frozen. If your skins feels cold, frosty, crisp, or resilient, you have got it! 	Wear proper clothing. Maintain general body warmth. Shelter against the weather. Good circulation—avoid tight/snug fitting clothing and boots/shoes. Use the buddy system for early detection. Check extremities. Protect face, head, and neck during cold, windy weather. Adequate diet, emphasis on fats and carbohydrates. Avoid perspiration. Keep hands and feet dry. Do not touch metal objects. Wear mittens instead of gloves. Do not smoke or use alcohol.	Identification of injury, protection of injury, evacuation to a medical facility. Minor —rewarm with warm flesh, warm water —stimulate circulation (do not rub) —drink warm liquids (no alcohol) Major —immersion in water, (105°/110°F) until completely thawed —cover with sterile dressing (loose) —do not allow to refreeze
Carbon monoxide poisoning 	Use of stoves or internal combustion engines inside of shelters or living environment. Fumes can asphyxiate even when there is adequate oxygen.	Carbon monoxide is odorless, tasteless, colorless, and heavier than air. Often there are no symptoms of this poisoning, but you could feel —burning eyes —dizziness —throbbing temples —sharp headache —pounding pulse —running nose —coughing Look for —"cherry pink" skin appearance —drowsiness —muscle twitching	Maintain good ventilation whenever a stove, heater, or lamp is burning. Never go to sleep with stoves, heaters, or lamps burning. **When Using Emergency Cooking, Lighting, or Heat — Avoid Carbon Monoxide Poisoning by Maintaining Adequate Ventilation.**	Get to fresh air. Breathe deeply. Mouth to mouth resuscitation. Warmth and rest.

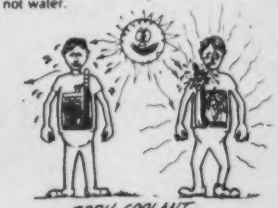
Body Upsets That Can Occur In Cold Environments.

Body Upset	Predisposing Factors	Signs and Symptoms	Prevention	Treatment
Sunblindness (also snowblindness) See same topic in heat section for more details.	Bright sun reflecting on snow and ice. Occurs on overcast days (ultraviolet light).	See same topic in heat section.	Sun-goggles, sunglasses with side protection. Improvise glare shades.	See same topic in heat section.
Sunburn See same topic in heat section for more details.	Skin exposed to sun, and sun reflecting on snow and ice. Occurs on overcast days (ultraviolet light).	See same topic in heat section	Keep clothing on. Apply opaque ointments to exposed skin.	See same topic in heat section.
Windburn A burn-like irritation of the skin.	Cold temperatures and strong winds.	Chapped, reddish skin.	Protect exposed skin.	Prevent further exposure. Apply skin ointments or creams.
Dry skin Skin with its natural oils may be cooled from 32°F down to 20°F before frostbite sets in.	Caused by cold, dry weather.	Dry, chapped skin.	Alleviate by applying a grease or oil based ointment. Excessive washing with soap removes protective skin oils. Use a skin lotion or cream.	Animal or vegetable oils will eliminate dry skin.
Earache Irritation of the eardrum caused by wind.	Wind blowing into ear. More common in cold weather.	Pain in ear.	Protection of the outer ear canal. Wear adequate head protection that covers the ears. Use a plug of cotton or soft tissue.	Prevent further exposure.
Chilblains	Repeated exposure of bare skin at temperatures between the low 60°'s F. and 32°F.	Rosy cheeks. Skin is red, rough, itchy.	Prevent exposure by dressing adequately.	Apply skin lotion or ointment.
Immersion foot (trench foot). Cooling of an extremity at temperatures above freezing causing injury to nerves, muscles, and blood vessels.	Caused by a prolonged exposure to wet conditions, usually temperatures are above freezing. Caused by wearing vapor barrier boots or wearing wet socks and boots for extended periods. The amount of time the extremity is in a wet and immobile condition will determine the extent of injury.	Skin is cold, swollen, waxy in appearance, mottled with burgundy to blue colored splotches. In early stages skin is wet, white, and wrinkled. Walking becomes difficult and painful. Skin becomes numb to touch, deep sensations are lost. Accompanying problems are throbbing pain, burning sensations, cold sensitivity, swelling, muscle weakness, paralysis, atrophy.	Keep feet and hands dry and warm. Change socks, gloves, mittens several times each day. Wipe dry inside of boots when changing socks. Wipe feet dry. Apply foot powder.	Dry feet or hands, and provide warmth. Restore circulation. Bathe to prevent infection using plain white soap. Dry thoroughly and elevate feet. Do not walk.

BEST COPY AVAILABLE

BEST COPY AVAILABLE

Body Upsets That Can Occur In Hot Environments.

Body Upset	Predisposing Factors	Signs and Symptoms	Prevention	Treatment
Hypohydration (dehydration) A lessening of the body's water table. Inhibits normal body functions.	The body loses water rapidly in hot weather through perspiration, respiration, urination, bowel movement.	First stage, mild, 1-5% loss of body water —thirst, loss of appetite, weakness, impatience, nausea, irritability, drowsiness, loss of efficiency, general discomfort, yellow urine. Second stage, moderate, 6-10% loss of body water —dizziness, headache, dry mouth, dark yellow urine, absence of salivation, shortness of breath, impaired speech, inability to walk, tingling of limbs, blueness of tongue and lips, mental impairment. Third stage, severe, 11-20% loss of body water —delirium, tongue swollen, spasms, deafness, dimming of vision—**death.**	Adequate (continuous) water intake. Proper diet (replenish salt loses). Slow down, rest in shade. Keep clothes on. Breathe through nose. Ration your sweat, not water.	Drink water. Replace body salts. Find shade.
General Signs and Symptoms of Body Heat Strain When it's hot, be on the lookout for the following signs in yourself and others —general fatigue and weariness (all muscles and joints) —headache, nausea, faintness —personality changes (irritability, carelessness, immature outbursts) —abnormal pulse (weak, rapid, irregular) —change in appearance (pale skin, flush, bluish lips or fingernails) These signs may or may not be caused by heat strain. Keep a margin of safety and treat them as such.			 BODY COOLANT	
Heat syncope (fainting) Injuries can result from falling.	Prolonged standing or exercising in hot environments. The blood pools in the limbs, reducing flow of blood to the brain.	Feeling faint, giddiness, fatigue.	At first sign of dizziness, lie down with feet slightly elevated. Take plenty of fluids and water, follow proper diet, and get adequate rest in the shade.	Lie down or rest in the shade. Drink water.
Heat weakness (strain) Results from not being acclimatized to heat.	Occurs in very hot, humid weather.	Easily fatigued, headache, mental and physical inefficiency, insomnia, poor appetite heavy sweating, high pulse rate, general physical weakness.	Allow time to acclimatize. Drink plenty of fluids and water. Follow a proper diet and get adequate rest.	Cooler environment. Drink plenty of water. Replenish body salt loss. Lie down—rest.
Sunburn A first or second degree burn will retard or prevent sweating.	Exposure to sunlight, excessive ultraviolet radiation. Occurs even on cloudy days. A strong wind will make the burn more severe.	Burns, broken skin, infection-prone blisters. 	Keep clothes on. Wear lightweight and light colored clothing. Protect head and neck. (Sunburn occurs on cloudy days as well.) Apply opaque ointments or lotions containing aminobenzoic acid (PABA) to exposed skin.	Cool the skin. Apply approved burn medications. Avoid further exposure.

Body Upsets That Can Occur in Hot Environments.

Body Upset	Predisposing Factors	Signs and Symptoms	Prevention	Treatment
Sunblindness Burning of the mucouse membrane lining the surface of the eyelids and covering the front part of the eyeball.	Eyes exposed to too much solar radiation or reflected sunlight.	Redness, burning, watery or sandy feeling eyes. Headaches, poor vision, pain and swelling, abnormal sensitivity to light, smarting-itchy eyelids.	Wear proper sunglasses, with side protection. Or, improvise glare shades by cutting small eye slits in any material suitable to tie around the head.	Cover the eyes. Keep in dark environment. Cold compresses. Boric acid ointment. Antibodies to prevent infection.
Heat cramps Chemical unbalance, body salts deficiency is the primary cause.	Often due to strenuous activity in high heat and high humidity when heavy sweating depletes salt level in the blood and tissues. Also due to long term fluid and salt deficiency.	Heavy sweating. Muscle cramps in legs and abdomen. Painful, voluntary muscle spasms. Upset stomach. Skin is cold and clammy.	Adequate liquid intake. Proper diet. Replacement of body salt loses.	Replenish body salts. Plenty of water and food. Shade and rest. Gentle massage.
Heat exhaustion Circulatory unbalance. Disruption of circulatory system, causing insufficient supply of blood.	Too much exertion in hot environments. Usually a cumulative building process. Other heat upsets occur first.	Weakness, fatigue, dizziness, nausea, cold-clammy skin, possible cramps, delirium, heavy sweating, face flushed-then pale, possible vomiting, loss of appetite, lightheadedness, rapid, weak, or irregular pulse.	Minimize activity—find shade and rest. Take plenty of water. Follow a proper diet—replenish body salts loss, high energy snacks.	Find shade and rest. Lie flat on back — elevate feet. Keep warm. Take plenty of cool water. Salty water as tolerated (½ teaspoon of salt/-quart of water).
Heat stroke Nervous system unbalance. Body temperatures rises rapidly, pulse pounds, blood pressure is high.	Usually caused by excessive sweating under conditions of high heat, high humidity, direct sunlight, and muscle activity.	Sweating stops and skin becomes dry. Weakness, nausea, headache, pounding pulse, high temperature. Skin flushed, then turns ashen. Delirium or coma, unconsciousness.	Do not allow body temperature to rise. Slow down and get plenty of rest in the shade. Take plenty of water and follow proper diet—replenish body salts loss.	This is a medical emergency. Cool the body anyway possible. Wet clothing and fan to increase evaporative cooling. Find shade, massage extremities. Hydrate with salty fluid (½ teaspoon of salt/-quart of water). Do not take alcohol or aspirin. Evacuate and get to medical facility as soon as possible.

Heat Exhaustion

1. Pale face
2. Weak pulse
3. Moist cool skin, sweating profusely
4. Low temperature

Care:

1. Position head level or low
2. Give salt in solution
3. Keep warm
4. Call doctor

Sunstroke

1. Red face
2. Rapid strong pulse
3. Hot, dry skin
4. High temperature

Care:

1. Elevate head
2. Do not give stimulants
3. Cool body by cold bath or cold applications
4. Call doctor

BEST COPY AVAILABLE

KITCHEN FIRST AID SUPPLIES

In a home injury or medical emergency, YOU have the on-scene responsibility to determine needs and priority of action.

Saran wrap	To cover severe burns
Baking soda	To neutralize acid and for treatment of shock
Salt	Helpful in treating heat problems

HOME MEDICINE CABINET

The following medications are for minor illness. If illness persists, consult your family physician.

Additional medications may be required occasionally and should be obtained at time of need.

CONTENTS

3 1-oz bottles syrup of ipecac	Induce vomiting-discuss with a physician before purchase
1 Bottle aspirin (5 gr.)	To relieve minor pain
1 Bottle children's aspirin	
Cough mixture (Cheracol, Romilar, etc.)	An aid in suppressing cough.
Diarrhea medication (Kaopectate, etc.)	Aid in control of diarrhea
Laxative (castor oil, Ex-lax, etc.)	Aid in relief of constipation
Antihistamine (Contac, Coryban D, etc.)	Decongestant
Antacid (Tums, Alka-Seltzer, Digel, etc.)	To relieve stomach distress
Antibacterial soap (Phisoderm, etc.)	To clean wounds
Antibacterial ointment (Neosporin, Mycitracin, etc.)	Promotes healing of minor wounds
Rubbing alcohol	Skin antiseptic, etc.
Vaseline	Varied uses
Oil of clove	Toothache
Thermometer (oral-rectal)	Determine temperature

PRECAUTIONS

- *All medications, no matter how mild, must be kept out of children's reach.*
- *Any poison, or special medication, should be under lock and key.*
- *Every medication and container should be clearly labeled.*
- When in doubt as to freshness of a medicine, throw it away.

HOME FIRST AID SUPPLIES

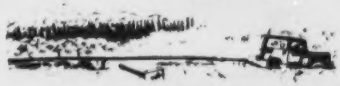
First aid supplies should be kept together, in a location known to all family members.

1 Small box sanitary napkins (Kotex, Modess, etc.)	As a dressing to control severe bleeding
2 Triangular bandages	Arm sling, to secure dressing
12 2x2 steri gauze pads	Cleaning wounds, dressing
10 3x3 steri gauze pads	For Wounds
6 4x4 steri gauze pads	
2 One-inch x 5 yds gauze bandage	Hold dressing in place
3 Two-inch x 5 yds gauze bandage	
3 Three-inch x 5 yds gauze bandage	
1 Box Band-aids, assorted sizes	Bandage for smaller wounds
1 Roll one-inch adhesive tape	Secure dressings
1 Pkg. cotton-tipped applicators	Various uses
1 Small scissors	Cut bandage material, etc.
1 Small tweezers	Remove splinters, etc.

First aid training is important to the wellbeing of the family.

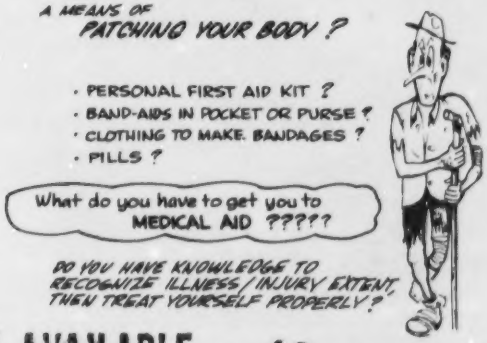
AUTOMOBILE FIRST AID KIT

The first aid kit carried in your automobile is normally used for traffic-related accidents or other injuries occurring while traveling. The contents of this basic kit should be placed in a sturdy container, i.e., plastic lunch box, surplus ammo box, etc., and secured in the trunk of your car.



4	Sanitary napkins (Kotex, Modess, etc.)	Dressing to control severe bleeding
2	Triangular bandages	Arm sling, to secure dressings
10	3x3 Steri gauze pads	Cleanse wounds, dressings
10	4x4 Steri gauze pads	
2	2-inch x 5 yes. gauze bandage	To secure dressing
2	3-inch x 5 yds. gauze bandage	
1	Small box assorted band-aids	Bandage for smaller wounds
1	Roll 1-in. adhesive tape	To secure dressing
1	1-oz. antibacterial soap (Phisoderm, etc.)	Cleaning wounds
2	Eye pads	Dressing for eye injury
1	½ oz. antibacterial ointment (Neosporin, Mycitracin, etc.)	Promotes healing of minor wounds
12	Aspirin (5 gr)	Relief of minor pain
1	Pkg. antacid (Tums, Digel, etc.)	Stomach distress
4	Wash 'n dri towelettes	Cleanse skin - Injured and First Aiders
1	Wire splint	For suspected fractures
1	Scissors	For cutting material
1	Tweezers	Removing splinters, etc.

Additional items may be added to this kit at your discretion. Other items, such as blanket, plastic tarp, and fire extinguisher, should also be considered.


A MEANS OF
PATCHING YOUR BODY ?
· PERSONAL FIRST AID KIT ?
· BAND-AIDS IN POCKET OR PURSE ?
· CLOTHING TO MAKE BANDAGES ?
· PILLS ?
What do you have to get you to MEDICAL AID ?????
DO YOU HAVE KNOWLEDGE TO RECOGNIZE ILLNESS/INJURY EXTENT, THEN TREAT YOURSELF PROPERLY ?

BEST COPY AVAILABLE

Survival First Aid

Survival first aid is needed when people are unable to get professional medical help for a period of time. Individuals must be prepared to help themselves and others.

Every survival situation has first aid requirements. Minor injuries or ailments become major problems under survival conditions, and prompt attention becomes more critical than under ordinary conditions.

Treatment performed under survival conditions may be substandard compared with modern medical standards, but it is the best treatment available and should increase survival expectancy.

Control of Bleeding

Control of bleeding is always important — even more so under survival conditions because transfusions are usually not possible.

The flow of blood should be stopped immediately, using a method effective for the type and amount of bleeding. Simple pressure over the wound, with or without a dressing, often works, especially for venous or capillary bleeding. Minor arterial bleeding can be controlled with local pressure and extremity wounds may be elevated above the heart and pressure applied. More serious arterial bleeding can be temporarily controlled by pressing the artery against a bone. Direct pressure stops 95 percent of all bleeding.

Wounds

Clean wounds promptly using clean, preferably sterile, water. Irrigating the wound rather than scrubbing hard will minimize additional tissue damage. Wash foreign material from wound to remove sources of infection and wash skin around wounds thoroughly before bandaging.

Pain, Injury, and Shock

Pain is warning of injury or damage to some part of the body. Pain can be controlled, and if the survival problem is grave enough, it is possible to override pain and carry on.

Reduce pain by

- understanding its source and type.
- recognizing that it is a discomfort that must be tolerated temporarily.
- concentrating on what must be done — think, plan, keep busy.

Rest the injured part of the body in the most comfortable position. Splints or bandages may be needed for immobilization. Warmth or cold can ease pain. Apply warm and cold water to the painful area to determine which is most comfortable.

Some degree of shock is present in all injuries. Shock may be the most serious consequence of injuries. It is the body's reaction to injury or emotional disturbance. Be familiar with signs and symptoms of shock in order to recognize and deal with it. The best approach is to treat all injured patients for shock. It won't hurt, and it may help.

In shock, pulse is weak and rapid. Breathing is shallow, rapid, and irregular. Skin is pale and feels cold and moist. "Cold sweat" is common. The eyes appear vacant and may be dilated. The victim feels weak, faint, or dizzy, and may be restless, frightened, and anxious. Thirst and nausea often accompany shock. As shock deepens, the victim may become quieter and slip into unconsciousness.

Do not wait for these symptoms before treating for shock. Expect it in every serious injury and treat simultaneously. The patient should be as comfortable as possible with head lowered to insure adequate blood supply to the brain (unless there is a head injury). Victim should be kept warm, but not hot, and protected from weather.

In emergencies, shock often occurs immediately. This shock is mental and can occur without physical injury. Post-impact shock varies widely in severity, but is almost universal.

Injuries to Bones and Joints

Under survival conditions, initial immobilization of fractures, dislocations, and sprains is part of the ultimate treatment, rather than a temporary measure, to prevent further injury en route to the hospital. Proper immobilization hastens healing and improves the chances of the injured part being used again. Under survival conditions, the injured part must be immobilized for relatively long periods of time, yet still permit patient movement.

Traditional first aid procedures call for immediate splinting and immobilization even if the limb is disfigured. In survival, do everything to slowly and surely return broken bones to original physiological position. If this is not done, the limb may become permanently disfigured or add to medical complications. Protruding bones which have broken through skin must be surgically replaced.

Burns

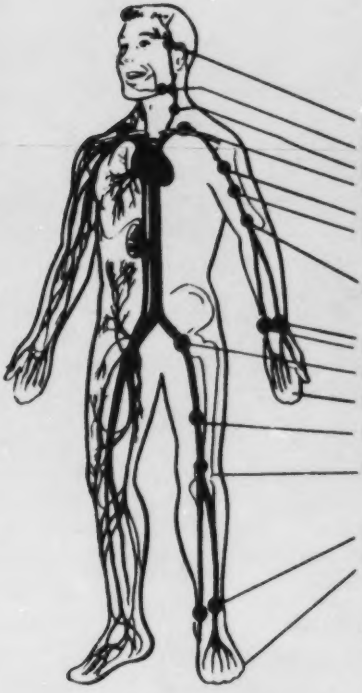
Burns are serious injuries and are common during emergencies. They are very painful and susceptible to infection. They cause large losses of body fluids and salts. Treat to relieve pain and prevent infection by covering burn with clean dressing of any type which permits movement and vital survival functions.

Maintaining body fluid and salt levels is essential in burn treatment. During emergency, fluids must be administered by mouth. Patients should be given adequate water immediately after treatment and blisters that develop should not be broken as they provide a sterile, natural covering

NORMAL VITAL SIGNS	SYMPTOM	SIGNIFICANCE
Pulse Adult—60 to 80 beats/min. Child—80 to 100 beats/min.	No pulse Rapid/strong Rapid/weak	Cardiac arrest Fright, Hypertension Shock
Respiration Adult—15 breaths/minute Child—20 to 25 breaths/minute	Absent, labored, gasping Red, frothy blood	Airway obstruction, heart problem Lung injury
Eye Pupils Equal in size Constrict when exposed to light	Dilated Constricted Unequal Fixed, unmoving blank stare	Cardiac arrest, Unconsciousness, Fright Indicates drug use Head injury, Stroke Hysterical paralysis (scared to death)
Temperature 98.6 degrees F.	Skin—cool/dry cool/clammy hot/dry	Exposure to cold Shock Heat stroke, high fever
Skin Color Good indicator of body upsets for lightly pigmented people	Light pigmentation skin color—red —white —blue Dark pigmentation blue color around fingernails or inside lips of mouth	High blood pressure, heart attack, carbon monoxide poisoning, heat stroke Shock, heart attack Asphyxia, poisoning Oxygen problems
Mental Alertness	Disoriented, unresponsive, confused unconscious	Injury, body upset, lack of rest
Can Move and React Can voluntarily move body parts Can touch and feel	Unable to move legs Unable to move arms One side of body unable to move Numb feelings in arms, legs, body	Spinal cord injury below neck Spinal cord injury in neck Head injury, brain damage, stroke Spinal cord injury OR IN GENERAL, INJURIES AND/OR BODY UPSETS

PRESSURE POINTS FOR CONTROLLING ARTERIAL BLEEDING

USE PRESSURE POINT NEAREST THE WOUND,
BETWEEN HEART AND WOUND



FRONT OF EAR (OPENING IN SKULL)
HOLLOW SPOT IN JAW BONE
BETWEEN NECK MUSCLE AND WINDPIPE
BEHIND COLLAR BONE CLOSE TO NECK
ARMPIT
HANDS BREADTH DOWN FROM ARMPIT (INSIDE)
JUST ABOVE ELBOW (UNDER MUSCLE)
JUST ABOVE WRIST (PULSE POINT)
GROIN WHERE LEG AND PELVIS JOIN
EACH FINGER JOINT
HANDS BREADTH DOWN FROM CROTCH
BEHIND LEG JUST ABOVE KNEE JOINT
BEHIND ANKLE (UNDER HEAVY MUSCLE)
EACH TOE JOINT

Points

THE SAME ON BOTH SIDES OF BODY

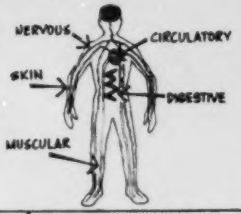
TOURNIQUET IS TO BE USED ONLY IN EXTREME BLEEDING OR AS A LAST RESORT

THE 3 B's
BREATHING
BLEEDING
BONES
SHOCK

CONTROL OF BLEEDING
- ✓ DIRECT PRESSURE
- ✓ ELEVATION
- ✓ PRESSURE BANDAGE
- ✓ CONSTRICTION BANDAGE
- ✓ PRESSURE POINTS
- ✓ TOURNIQUET

BEST COPY AVAILABLE

TYPE OF INJURY	SIGNS AND SYMPTOMS	TREATMENT
Bleeding--Severe Speedy and proper treatment essential Concentrate on keeping blood in the body	Arterial bleeding—pulses or spurs of bright red blood—WILL BE FATAL WITHIN MINUTES	Direct pressure to bleeding area—USE HAND. Apply compresses—use any material available—keep applying more compresses until bleeding stops. Use pressure points. Elevate wound, if no fracture. Apply cold packs, if available. Use constricting band (TOURNIQUET) only as a last resort and then leave on, do not loosen. (Loss of limb can be expected.)
Bleeding—Minor In general: clean, close cover 	Abrasion/avulsion (removal of tissue)— Puncture wound— Lacerations/incisions—	Wash thoroughly—cover with sterile dressing—bandage. Leave objects imbedded rather than cause further injury and bleeding by removal. Clean as thoroughly as possible. Cover with sterile dressing. Wait for evacuation. Clean wound with sterile compress and soap. Rinse with water, blot dry. If wound is open, close with butterfly bandages. Do not apply antiseptic solutions (iodine, merthiolate, mercurochrome) directly to wound.
Large Gash—Exposing Internal Organs	Self-evident	If organs are protruding, do not push them back. Keep moist with a saline solution (1 teaspoon of salt in quart of sterile water). Cover with sterile dressings—bandage applying minimum pressure, unless bleeding.

TYPE OF INJURY	SIGNS AND SYMPTOMS	TREATMENT
Bleeding—Internal  	First sign is usually rise in pulse above 120. Dizziness when standing. Lungs—Coughing up bright red, frothy blood. Chest pains or outward evidence of injury. Stomach—Vomitting blood dark in color. Pain or signs of injury around stomach. Blood in urine or feces. Cold, clammy, pale skin. Pulse—rapid, weak. Breathing rapid. Excessive thirst.	Depending on type of injury, keep subject lying down or subject may be more comfortable partially sitting. Shelter, warmth. Apply cold packs to area. Give no liquids if evacuation is soon. Do not move extensively until evacuation.
Shock Failure of cardiovascular system to provide sufficient blood circulation. Normal reaction of body to injuries or emotional disturbances. May not occur until several hours after injury or emergency event.	Pulse—weak and rapid. Breathing—shallow, rapid, irregular. Skin—pale, feels cold and moist. "Cold sweat" is common. Eyes—appear vacant, may be dilated. Subject feels weak, faint, or dizzy. May be restless, frightened, or anxious. Often thirsty and nauseated. DEEP SHOCK—subject becomes quiet, slips into unconsciousness.	DO NOT WAIT FOR SYMPTOMS. EXPECT IT AND TREAT FOR IT. Lie subject down—shelter—insulate from ground—keep warm, not hot. Raise feet slightly, unless there is head injury. Treat injuries, relieve pain. If conscious, slowly administer warm salt solution (½ teaspoon of salt in quart of water).
Fractures—General Simple—no break in skin. Compound—bone has penetrated the skin. Fractures Dislocations	Pain, swelling, deformity. Loss of movement and discoloration. Subject may have heard or felt a snap. Bone may be protruding through skin. Sprains TREAT THEM ALL THE SAME: IMMOBILIZE!	Avoid necessary movement, prevent further injury. Control bleeding. Immobilize the fractures—splint them "where they are" only if the limb is in normal anatomical position. Splint joints above and below the fracture. Reduce gross deformities—immobilize in a natural position. Reposition immediately after injury, if possible. Treat for shock. Keep compound fractures clean—wash with saline solution. Cover with sterile dressing.

TYPE OF INJURY	SIGNS AND SYMPTOMS	TREATMENT
Heart Attack	Chest pains, difficulty in breathing. Known condition. Swelling of feet and ankles. Blue color in lips, fingertips, earlobes, face. Weakness, dizziness, faintness. Skin may be cold and clammy. Chest pain may radiate to shoulders (especially left), neck, or jaw. Pain described as "crushing" or "pressure".	If conscious, get subject comfortable—loosen clothing—do not move. Keep warm. No liquids. Keep calm and rest. USE CPR IF BREATHING OR PULSE STOPS.

CARDIO-PULMONARY RESUSCITATION

1. IF VICTIM IS UNCONSCIOUS CLEAR AIRWAY

- Place victim on back on firm surface. Lift chin with fingers of one hand. With other hand, press forehead to tilt the head back.

- Look, listen. Feel to determine whether victim is breathing.

2. IF VICTIM IS NOT BREATHING

- Pinch nostrils closed.
- Inflate lungs rapidly 4 times.
- Open your mouth very wide. Make airtight seal over victim's mouth to prevent air leakage.
- Blow into victim's mouth to inflate lungs. Remove mouth and allow the air to escape.
- Check for pulse.

3. IF PULSE IS ABSENT

- Restore circulation by administering closed chest heart compression.
- Place heal of one hand 3 fingers from lower end of breast bone.

- Place other hand on top of the first hand, interlock fingers to assist in keeping fingers off of chest wall.
- Depress sternum 1½ to 2 inches. Repeat 80 times per minute.
- ONE OPERATOR. Inflate lungs 2 times after each 15 compressions.
- TWO OPERATORS. Inflate lungs once during the upstroke of each 5th compresion, with no pause on compressions.

TYPE OF INJURY	SIGNS AND SYMPTOMS	TREATMENT
Head Injuries Concussion—stunning or jarring of the brain. Compression—swelling of the brain or hemorrhage within the skull. Check for spinal fracture, especially in neck.	*Unconsciousness*—the longer, the more serious. Pale face, cold skin, weak and rapid pulse, shallow breathing. Partial paralysis. Irrational, talking funny, or making nonsensical statements. Bleeding or fluid secretions from ears, nose, eyes. Unequal pupil size, unequal pupil response to light.	Control bleeding. Suspect neck injury. (Immobilize neck injuries on backboard.) Treat for shock. Place subject on abdomen, with head to one side, so blood/vomit can drain. Loosen clothing. Clear air passages.. Face pale? Raise feet—lower head. Face flushed? Lower feet—raise head, especially if bleeding or secreting. Give nothing by mouth. Do not give stimulants.
Burns Generally, relieve pain by excluding air. Treat for shock.	1st degree burn—reddening of skin. 2nd degree burn—deeper burn with blistering. 3rd degree burn—tissue damage, charring, and cell damage.	Apply a salt free lotion. Do not apply lotions—immerse in cold water or cover with cold cloths. Cover with sterile dressing. Do not break blisters. Do not apply lotion or immerse in water. Cover with sterile dressing—wrap in plastic to exclude air, then ice packs to relieve pain. Treat for shock. Administer salty fluids (as much as tolerated).
Infection Blood poisoning is one of the final results of unchecked infection. Infection can extend from wound or to distant body parts through the blood (circulatory) system.	Wounds that bleed freely are less likely to be infected than wounds that do not bleed at all. Swelling, redness, pain, fever, sensation of heat, tenderness, pus, red streaks.	Treatment: Hot salt water or boiled water soaks and compresses. Penicillin or other antibiotics. Prevention: Avoid contamination of wounds and burns by unnecessary exposure. Do not contaminate sterile dressings. Use antiseptics on cuts and scratches. Use dressings that more than adequately cover the wound.

TYPE OF INJURY	SIGNS AND SYMPTOMS	TREATMENT
Eye Injuries	Pain, burning, redness, tearing, headache.	Do not attempt to remove foreign bodies from the eyeball. Turn head to one side, try flushing out object with water. Apply a light fluffy dressing. Foreign bodies may be removed from under eyelids. For chemical burns, flood eye with large quantities of water. (Don't wait for sterile water.) Prevent the injury from becoming worse. If only one eye is injured, bandage both to keep eyes stationary.
Dislocations Disturbance of normal joint alignment	 Visual deformity , severe pain.	Check for pulse below injury. If no pulse, you must reduce dislocation or attempt return to normality, by pulling slowly, steadily, forcefully, and guiding the misplaced bone back into position. (Loss of limb will occur if no circulation.) Do not attempt to relocate injury if aid or rescue is near.
Sprains Stretching of damaging of tendons, ligaments, tissues, and blood vessels surrounding a joint.	Pain, swelling, discoloration, tenderness.	In doubt? Treat as a fracture. If sure—elevate injured area—use slings—apply ice or cold compresses to reduce swelling and pain. Wrap joint if you must walk. Do not remove shoes.

TYPE OF INJURY	SIGNS AND SYMPTOMS	TREATMENT
Back Injury Fracture of spine or neck	Pain, shock, paralysis. Acute pain at point of fracture. Broken back—paralysis of legs, feet, toes. Broken neck—paralysis of fingers.	Minimize shock—prevent further injury. Do not move unless absolutely necessary. Do not bend, twist, or move head and body. IMMOBILIZE—keep subject lying down.
POISONING Poisons that should be vomited too much or wrong kind of medicines Pest poisons, weed killers	Poisons that **should not** be vomited Petroleum Products Poisons that burn mouth, lips, (drain cleaners, toilet cleaners) Vomiting, labored breathing. Deep sleep — can't be aroused. Eye Pupils — very large, or very small. Burns around mouth. Breath smells like gasoline. Container indicating subject ate or drank poisonous material.	* Conscious subject: Dilute with water or milk Call poison control center or doctor * Unconscious subject: Check for breathing Lie subject on one side Call poison control center or doctor
General Wounds		Expose wounds—remove foreign bodies from surface. Do not probe depths of wound. Control bleeding. Prevent infection, apply antiseptic, apply large dressing. Treat for shock. Irrigate wounds with sterile water, do not scrub.
Ears	Earaches may indicate infection or perforated eardrums.	Do not put anything into ear. Do not probe for foreign objects. Apply a light dressing.

Maintaining Good Health And Hygiene During Emergencies

During disasters and emergencies keeping clean to maintain good health is essential, and often times it is hard to accomplish. Because of the emergency impact and other priorities, cleanliness is often forgotten or given a low priority. This is due to water shortages and disruption of normal sanitation facilities.

A conscious effort to maintain standards of cleanliness and sanitation must be made. Good hygiene minimizes internal and external infection. The smallest abrasion on an unclean body can easily become infected and present further survival obstacles. Keep hands as clean as possible, clean under fingernails, and sponge face, armpits, crotch, and feet at least once a day.

EMERGENCY HEALTH BEGINS NOW

Your best emergency health protection begins by taking care of yourself and your family before emergencies happen.

- Keep a regular schedule of medical and dental check-ups.
- Family members should maintain proficiency in emergency first aid.
- Keep immunizations up to date.
- Keep up to date family health records and data: immunization dates; blood types; required medications; special diets; allergies to drugs, medications, other.

EMERGENCY RESPONSE

PROTECTING AND SUPPORTING A HUMAN BODY WITHOUT ANY PRIOR PREPARATION

Medical Self Aid	Life Support	Maintaining Life	Signalling Your Distress
Patching up your body *Maintaining body efficiency*	*Protecting your body* *Insulation* *Ventilation* *Shelter*	*Getting enough water and food sustenance*	*Securing aid and further life support needs*

NO WATER TO SPARE?

The following can be substituted for water as cleansers:

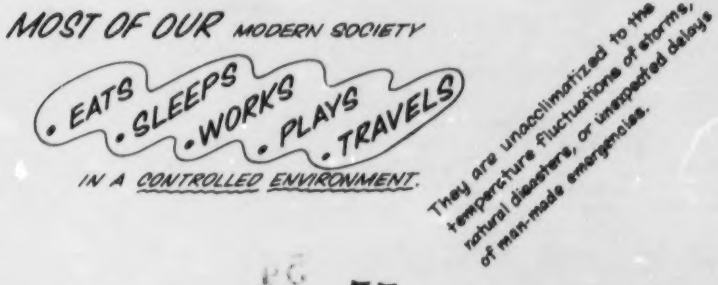
- Rubbing Alcohol.
- Lotions containing alcohol, such as witch hazel, etc.
- Shaving lotions.
- Face creams and hand lotions.
- Sealed packets of moistened paper towels.

PROTECTION AGAINST INTESTINAL AILMENTS

Diarrhea, food poisoning, and other intestinal diseases are common and often serious. They are caused by contaminated food, water, or other beverages.

To guard against intestinal diseases

- keep body and hands clean. Avoid overhandling of food. Keep fingers out of the mouth. Hands need special attention. In emergencies, everything touched can carry disease. There will be less of a chance of transmitting disease when hands are carefully washed, especially before handling food or drinking water, before and after caring for the sick, and after going to the toilet.
- If water is not available for washing dishes, use paper or foil plates, or eat from the can or packages.
- use water treatment tablets or boil water.
- wash and peel all fruit.
- do not keep food for long periods after preparation.
- boil eating utensils in water.
- keep living area clean. Keep flies and other vermin off food.
- dispose of human waste and garbage carefully.
- mix powdered charcoal with a drink to stop diarrhea.
- brush teeth regularly. Soap or table salt and soda substitute for toothpaste, and a small, green twig chewed to pulp at one end makes a good toothbrush. Rinse mouth after eating.


MOST OF OUR MODERN SOCIETY
• EATS • SLEEPS • WORKS • PLAYS • TRAVELS
IN A CONTROLLED ENVIRONMENT.
They are unacclimatized to the temperature fluctuations of storms, natural disasters, or unexpected delays of man-made emergencies.

SANITATION DURING EMERGENCIES

Disposal of garbage and human wastes are interrupted during emergencies. If not dealt with properly, wastes can cause typhoid, dysentery, diarrhea, and other sicknesses/diseases.

Improvising Toilet Facilities, Possibilities Include:

- Privy in back yard. Pits can be dug when high water is not a danger. A pit should be deep enough to be covered with two feet of dirt. It should **not** be dug within 50 feet of a well, spring, or other water supply, nor in any area subject to flooding.
- Indoors, cut a hole in the seat of a chair and place over a pail. Pails need to have a tight lid and covered when not in use. Plastic bags make good liners and can be sealed and stored for later disposal. OR, use any large can or box with a lid, lined with plastic bags.

A regular sprinkling of lime, household bleach, disinfectants, or creosol in any emergency toilet will control odor and insects.

Wash Hands After Using Toilet

Bury human waste at least two feet deep.

YOUR DAILY CHOICES

Versus

GARBAGE DISPOSAL DURING EMERGENCIES

When garbage cannot be buried immediately

- Strain liquids into emergency toilet.
- After straining, wrap residue in several layers of newspaper and store in large can with tight-fitting lid.
- When feasible burn, then bury garbage at least two feet deep.

CONTROLLING VERMIN

- Keep your emergency living area free of debris, garbage, refuse, rubbish, body wastes.
- Repair holes and cracks to keep out rodents.
- Screen windows and doors.
- Use household insecticides, but not in small, enclosed occupied areas.

Proper disposal of wastes controls disease, lessens dangers to health, controls insects and rodents.

SANITATION PREPAREDNESS SUPPLIES

- Portable camping toilet, bucket or can with tight fitting lid.
- Good supply of plastic bags with ties for liners.
- Disinfectants: powdered, chlorinated lime; household bleach, disinfectants, deodorants, insecticides.
- Trash cans with tight lids, large garbage bags.
- Hygiene Supplies: soap; toothpaste; deodorant; dry shampoos; sealed packets of moistened paper towels, sanitary napkins; toothbrushes; nail brush, clippers, tweezers; wash pan, towels; razor and razor blades; combs and hair brushes.
- Newspapers.
- Paper Towels.

EMERGENCY WATER — EMERGENCY DRINKING AND WASHING WATER IN: DISASTERS, DROUGHTS, AND POWER OUTAGES

THE WATER REQUIREMENTS OF THE BODY

Water is fourth on the list of necessities for life — and instrumental in maintaining body chemical balance. The body is approximately 75 percent water, with intake and output of liquids necessary to the processes of life and the norman functions of the vital organs.

Daily water requirements (minimum of two quarts) help maintain proper balance and efficiency within the systems of the body. Any lower intake results in gradual dehydration and the loss of the body's capabilities and proficiency.

Also included in the Body Requirements for Water are the various uses of water on a daily basis for **Hygiene** and **Sterilization**, such as: bathing, brushing teeth, dishwashing, and food preparation, etc. An additional 2 gallons per day per person is usually required.

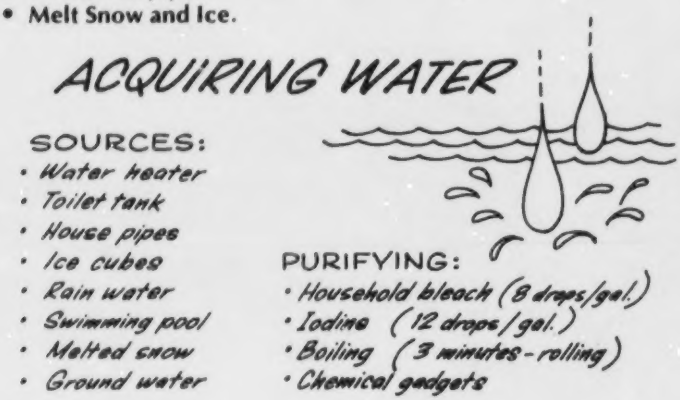
Humans lose water in three ways—through **perspiration, respiration,** and **urination.** The first two are the automatic processes that remove excess body heat from the body. Urination removes the waste products of food oxidation and muscle or energy use. There is little you can do about these automatic water losses, but it is useful to know their insidious effects. Losing water to the extent of 2.5 percent of body weight, or approximately one and a half quarts of body water, will reduce your efficiency 25 percent. If you are working, walking, or playing in a temperature of 110°F., your normal ability will be reduced another 25 percent. The sweat rate of one hiking in hot conditions can increase to two quarts per hour.

Short Term Emergency Water Sources Available In The Home

There is no substitute for preparedness on a daily basis. In an extended emergency, water could be a problem. However, you may find enough water sources in your home to live comfortably for a number of days.

Sources:

- **Home Water System** (know where your water shut-off valve is and shut-off water from the main to avoid contamination).
  - There is a lot of water in your water pipes. Locate the drain valve at the lowest point under the house.
  - Hot Water Tank.
  - Pressure or storage tanks.
  - Flush tanks of toilets (caution, when disinfectant is used in toilet holding tank, the water is not safe for drinking. Use for washing only.)
  - Coiled hoses may contain water.
- **Refrigerator / Freezer**
  - Ice cubes, frost.
- **Canned Foods, Juices, Soft Drinks**
- **Waterbeds,** for washing only unless purified.
- **Nearby wells or springs.**
- Large buildings may have stored water reservoirs in addition to full pipes.
- **Melt Snow and Ice.**



Whenever possible, **melt ice for water rather than snow— you get more water for the volume with less heat and time.** If you melt snow by heating, put in a little snow at a time and compress it — or the pot will burn. If water is available, put a little in the bottom of the pot and add snow gradually.

Don't try to eat ice or snow. A day or two of taking water in this manner gives a swollen, raw mucous membrane in the mouth which may be so painful as to prevent eating or drinking until the inflammation subsides. Dogs eat snow and get away with it; humans can't.

Preparation of Water Under Emergency Conditions

STORING WATER RESERVES

Store your water reserves in thoroughly washed, clean containers, preferably of **heavy plastic with tight-fitting caps,** or in glass jugs or bottles with screw tops. Metal containers tend to give water an unpleasant taste.

You may want to buy 5-gallon containers of rigid plastic or glass for water storage. The plastic containers have the advantage of being shatterproof and lighter in weight than glass jugs.

Avoid storing water in **open** containers such as barrels, tanks or cisterns. These type facilities should be sealed at all times to avoid rapid buildup of bacteria and/or algae. (This is particularly true in hot or hot and humid temperatures.) Periodically adding a few drops of chlorine will help prevent algae buildup.

The taste in stored water can often times be restored through a simple aeration process: Pouring water from one container to another several times.

In the case of drought, wells may be drawn down to low levels sufficient to pull contaminates from nearby drain fields and other portions of sewage systems. It is a good idea to have a well checked regularly during drought conditions.

If water supplies are low or contaminated, it is imperative that children be watched closely to monitor their drinking source. They will generally get water to drink from any convenient supply.

Store at least two quarts of water per day per person.
A 14 day supply is recommended.

Preparation of Water Under Emergency Conditions

SYMPTOMS OF WATER ILLNESS

The following is a list of symptoms that may indicate to doctors and homeowners that contamination of drinking water supplies is occurring. These symptoms are classical gastrointestinal symptoms so their appearance may also be associated with other methods of transmission, such as food. However, if untested well water is the drinking source for people, with these symptoms, water should be bacteriologically tested by a laboratory.

Symptoms include, but are not limited to the following:

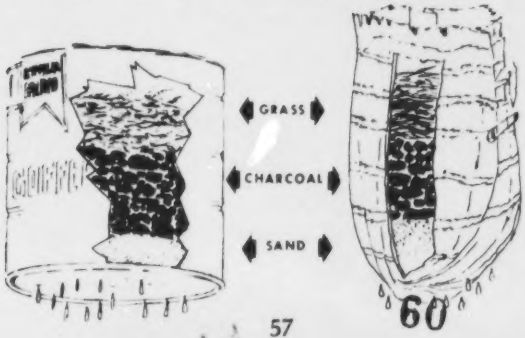
Nausea
Vomiting
Diarrhea
Malaise
Low grade fever
Fatigue and weight loss associated with other symptoms.
(vague feeling of discomfort)

NOTE: If possible, attempts should be made to obtain water by hauling from a safe, approved source.

It might be necessary at some time to utilize muddy, stagnant or polluted water. Keep in mind that this type of water may not seem palatable or even tolerable but if treated properly it will be harmless and it will satisfy your need for water.

You can get water that is almost clear from muddy streams or lakes by digging a hole in sandy soil one to six feet from the bank. Allow water to seep in, and then wait for the mud to settle.

Water from flooded streams, pools, springs, and swamps is safe to drink only after it has been purified. Some water may be discolored or turbid. It may be partially cleared by being filtered through an **improvised filter** of cloth or similar material with layers of sand, charcoal, and grass. Multiple layers of cloth are probably the most expedient method of filtration.



Merely letting muddy or turbid water stand in a bucket or container for a day will clear it substantially. Be gentle when pouring clear water off of the sediment. If the water is muddy, clarification is necessary prior to purification.

NOTE: CLARIFICATION IS NOT PURIFICATION.

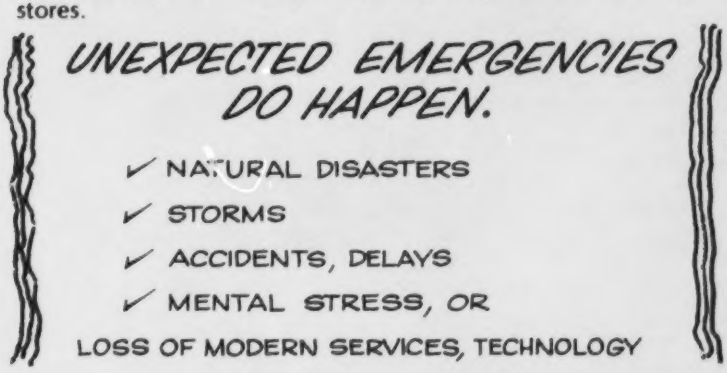
Water which is clear and pure in its appearance can be highly contaminated with bacteria. Under emergency or disaster conditions, all water sources should be treated as though unsafe.

Purification

IODINE OR TABLET PURIFICATION

If you have ordinary household 2-percent tincture of iodine in your home medicine chest, you can use it to purify small quantities of water. **Add 4 drops of tincture of iodine to each quart of clear water, 8 drops to each quart of cloudy water.** For a gallon, add 12 drops for clear water, 24 drops for cloudy water. Stir thoroughly.

Water—purification tablets that release chlorine or iodine can be used safely to purify water. They are inexpensive and can be bought at most sporting goods stores and some drug stores.



If you use water-purification tablets, **follow the directions on the package.** Usually 1 tablet is sufficient for 1 quart of water; double the dosage if the water is cloudy.

BOILING

The safest method of purifying water is to boil it vigorously for one minute plus an additional minute for each thousand feet of altitude. If in doubt, boil for 5 minutes.

DISTILLATION PROCESS

This process of water purification is very time consuming but sufficient. Distilled water has been boiled and the vapor condensed into the purest, tasteless form of water. Use aeration to improve taste.

Other methods used for improving the palatability of water would be to add sugar, Kool—aid, bouillon, tea, etc. — anything to induce the drinkability of the water.

Amount of water	Amount of solution to add to—	
	Clear water	Cloudy water
1 quart (¼ gallon).	2 drops.	4 drops.
1 gallon	8 drops.	16 drops.
5 gallons	½ teaspoon.	1 teaspoon.

EASY BLEACH METHOD

Any household bleach solution that contains hypochlorite, a chlorine compound, as its only active ingredient will purify water easily and inexpensively.

Bleach solutions with 5.25 percent of sodium hypochlorite are most common. They are available in grocery stores. Add the bleach solution to the water in any clean container in which it can be thoroughly mixed by stirring or shaking. The following table shows the proper amount of a 5.25 - percent solution to add to water.

Add the chlorine solution to the water and stir, then **let the mixture stand for 30 minutes.** After this length of time the water should still have a distinct taste or smell of chlorine. If this taste or smell is not present, add another dose of the solution to the water and let the water stand another 15 minutes. **The taste or smell of chlorine in water thus treated is a sign of safety.**

FOOD STORAGE FOR EMERGENCIES

The vast majority of families in America today only have enough food on hand to feed their families for a short period of time. Before WWI, it was normal, rather than the exception, to have a well stocked pantry, a family garden, and perhaps a root cellar. Extended family groups lived in close proximity, and when the unexpected occurred, a self-reliant attitude and mutual assistance prevailed.

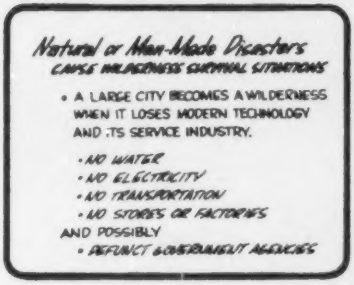
Today most Americans do not store food and other items for emergencies, nor do we cultivate self-sufficiency skills. We have become dependent on outside services and society for all of our necessities of life.

When disaster strikes, only those that are the best prepared and informed will have the optimum chances of survival.

REASONS TO STORE FOOD AND OTHER EMERGENCY SUPPLIES

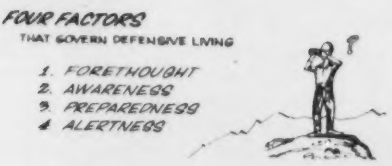
- Preparedness to cope with disasters and emergencies that will disrupt normal services.
- Strikes can shut down transportation systems or food processing industries.
- Unexpected family illness and hospitalization can pose extreme hardships on family budgets and resources.
- Hedge against inflation. Food prices increase yearly.
- Control food price fluctuations by not buying certain items when the price is high.
- Under stress conditions, proper diet is essential and a morale booster.

WHEN CHOOSING FOODS FOR STORAGE, INCLUDE THOSE THAT:


Natural or Man-Made Disasters
CAUSE WILDERNESS SURVIVAL SITUATIONS
• A LARGE CITY BECOMES A WILDERNESS WHEN IT LOSES MODERN TECHNOLOGY AND ITS SERVICE INDUSTRY.
• NO WATER
• NO ELECTRICITY
• NO TRANSPORTATION
• NO STORES OR FACTORIES
AND POSSIBLY
• DEFUNCT GOVERNMENT AGENCIES

- Require little or no water for preparation.
- Can be eaten without heating.
- Have a long shelf life.
- Can be rotated into your normal food supply.
- Are packaged in one-meal sizes.
- Require minimum storage space.
- Your family likes.

- **Meet the needs of infants, elderly, and other special diets.**



FOOD

Food is not, as many people believe, an immediate requisite to survival. Man can exist for some time on nothing but water and his own body fat.

But the average American is accustomed to a regular and abundant diet. Unexpected interruptions in the daily routine often cause irritability as well as anxiety. Infants, small children, the elderly and the sick could die within a week without nourishment.

Damage caused by earthquakes could interrupt the food chain we depend upon. Roads, bridges, runways, docks and railways could require extensive repairs in a widespread major earthquake. Commercial food stocks may be inaccessible within collapsed or unstable buildings. Fires and looting would diminish available reserves. Your family may not be able to get beyond the driveway to obtain outside resources. Governmental and private assistance groups may not be able to gain access to affected areas.

During the first few weeks of a food crisis, lack of vitamins and other essentials of a well balanced diet would not be of primary importance to previously well-nourished people. Healthful foods with enough calories to provide adequate energy would meet short term needs.

Your family should build up and maintain a 2-week supply of non-perishable food in the house; rotating and replacing it regularly to ensure freshness. Any emergency diet should have enough variety to provide the nutrients necessary for good health. When the blood sugar level drops below a certain point, possible detrimental reactions occur. Constant hunger pangs, coldness, weakness and loss of endurance are not conducive to a positive attitude. Psychological affects include:

personality and behavior changes
depression
irritability
nervousness and emotional instability
social withdrawal
decrease of communication and social interchange
narrowing of interests with an emphasis on thoughts of food.

Food, along with a protective environment, reverses the above affects.

The average man requires approximately 3000 calories daily. But he can subsist for a considerable period of time on 500 calories a day without harmful affects if activity is limited. Every bit of work requires additional food and water. Remember — the less you work, the less food and water you will need. A stress situation demands more energy than normal, and a reconstruction period also requires more.

Your food supply should include carbohydrates, proteins and fats to meet your families energy requirements:

Carbohydrates — sugar, starches, cereals and fruits. If water supply is severely limited, stick to these foods as they require less moisture to digest than proteins.

Proteins — meat, fish, eggs, milk, cheese, nuts and legumes. These provide fuel and are necessary to maintain and repair body tissues. If water supply is limited do not eat large quantities of meat.

Fats — olive and cottonseed oil, butter, margarine, etc. Necessary in small quantities for proper digestion and elimination.

Vitamins — Vitamin C cannot be stored by the body, but it usually takes several weeks of improper diet to bring on scurvy symptoms.

Perishable foods on hand at the time of the emergency should be eaten first if they are accessible. There may be no gas or electricity available in your home for cooking or refrigeration. Neither open flames or charcoal burners should be used in encloses areas.

Eat off the land or from your garden whenever possible. Familiarize yourself with local vegetation.

Eat regularly if possible. Don't nibble! On limited rations, plan for one good meal daily, then sit down and make a feast of it. Two meals a day is preferable, especially if one of them is hot.

Be sure to keep all food in covered containers. Keep cooking and eating utensils clean. Keep garbage in a closed container and dispose of it outside the home when it is safe to do so.

It is a falsehood to assume a person will eat anything if he is hungry enough. When frightened, upset and insecure, it is human nature to turn to things with which we are familiar. If you have a family, plan adequately. It would be far better to have a little extra than not enough. Remember — eat what you store and store what you eat.

Food storage is an individual undertaking. There is no set ideal or perfect pattern to follow. Needs will vary according to tastes, situations, and circumstances. Here are some suggestions for your family stockpile:

SUGGESTED FOODS FOR STORAGE

Meat	chicken, corned beef, Spam, ham, Vienna sausage, salmon, tuna fish.
Variety	sardines, oysters, jerky sticks, dried fish/ shrimp, meat spreads, cheese spreads, peanut butter, bacon bits.
Dinners	hash, ravioli, chili with beans, spaghetti, stew, chop suey, enchiladas, tamales, freeze dried combos.
Side Dishes	baked beans, pork-n-beans, refried beans, canned new potatoes, saurkraut, chinese crisp noodles, shoestring potatoes.
Canned Fruit	peaches, pears, applesauce, pineapple, cherries, plums, apricots, fruit cocktail.
Dried Fruit	apples, apricots, pears, peaches, pineapple, prunes, raisins, dates, fruit leathers.
Canned Vegetables	corn, beans, peas, mixed, lima beans, stewed tomatoes, asparagus, beets, chinese vegetables.
Cereal	soda crackers, any crackers, graham crackers, canned Boston brown bread, pre-sweetened cereal, granola, hard tack, Swedish flat bread.
Snacks & Desserts	protein bars, nuts, seeds, chocolate bars, hard candy, cookies, canned puddings, marshmallows.
Drinks	coffee and teas if heat available, Tang, Kool-aid, instant lemonade, non-fat dry milk, baby formula, condensed milk, fruit and vegetable juices.
Misc.	salt, pepper, jams, jellies, honey, liquid margarine, pickles, olives, catsup, mustard.
Water	**Minimum** 7 gallons per person, 2 week supply 2 quarts per day.
Vitamins	One-a-day, Vitamin C for stress.

KEEP AN INVENTORY RECORD AS FOLLOWS:

Keep An Inventory Record As Follows:

OUR FAMILY FOOD RESERVE

food	amount stored	date to replace	date bought

FOOD STORAGE RULES

No food can be stored without eventual deterioration, though freeze dried foods have an extremely long shelf life. Proper storage conditions will minimize deterioration however and keep food safe from contamination and insect damage as well as from changes in flavor and appearance. Keeping food dark, dry and cool will achieve the best results.

DARK — Clear glass or plastic should be kept in enclosed cupboards or closets. Avoid direct light on metal containers.

DRY — Keeping all storage containers off the floor prevents them from sweating and discourages the formation of rust and growth of bacteria. Coat with varnish or paraffin wax if humidity is high.

COOL — Ideal temperature for storage is between 40° and 60° F.

ROTATION — Fundamental to prevent spoilage, minimize loss of food value and flavor. It will also keep your taste buds acquainted with foods you may have to depend upon to survive.

GLASS — Jars keep out insects, but they break, don't stack well, allow light to penetrate, are expensive and always heavy.

BULGING or leaking cans should be discarded without tasting.

MOLDY foods should be discarded; except cheese — simply cut the mold off.

INFESTATION by insects is generally not harmful, but packages should be checked periodically and well sealed.

STORAGE GUIDELINES

- Store everything in unbreakable containers.
- Do not stack boxes, cans, etc. Put only one layer of objects on a shelf or on a floor.
- Build sturdy storage shelves. Enclose the fronts with doors that latch. A 2-inch piece of lath nailed across the front of a shelf will keep the contents from falling.
- Home canned foods packed in jars may be kept in divided boxes or separated by newspaper.
- Avoid storing food in automobile trunks and aluminum storage sheds. Temperature increases in these areas greatly reduce the shelf life of your food reserves.
- Store your food and supplies in the sturdiest part of your home. A room with an outside entrance or access is desirable. If your house collapses on your storage, much of it may be salvaged as long as explosion or fire has not occurred.
- Do not store volatile fuels in an enclosed space. It's better to eat cold food than to run the risk of fire, explosion, or poisoning by fumes.

Comparisons of Food Preserving Methods for Home Storage

	Retains original taste	Retains original nutrients	Retains original color	Long storage life	No need to rotate stock	Lightweight	No preservatives	No refrigeration needed	Table ready (cooked) in less than 10 minutes
Freeze Dried	●	●	●	●	●	●	●	●	●
Fresh	●	●	●				●		
Freezing	●	●	●				●		
Home Canning & Bottling								●	
Commercial Canning								●	
Home Dehydrating & Drying								●	
Commercial Drying Dehydrating & Packaging				●	●	●		●	

WHY PREPAREDNESS KIT ?

SO YOU AND COMPANIONS CAN BE SELF-SUFFICIENT WITH REASONABLE COMFORT.

SAMPLE MENU PLAN 2 - WEEKS

S	M	T	W	TH	F	ST
Cereal Milk Fruit Juice	Granola Milk Dr. Fruit Juice	Br. Bread Cocoa Marsh- mallows Marj/Jam	Graham Crackers Milk Fruit Protein Bar	Cereal Milk Fruit V-8 Juice	Granola Milk Dried Fruit Juice	Br. Bread Cocoa Marsh- mallows Marj/jam
Jerky Sticks Peanut Butter Jelly Sandwich Chocolate Bar	Sliced Spam Baked Beans Vegetable Cookies	Vienna Sausage Sauerkraut Cheese/ Crackers Raisins & Nuts	Tuna w/ cr. of mushroom soup Crackers fruit	Sardines Cheese Crackers Protein Bar Fruit	Sliced Spam Baked Beans Vegetables Cookies	Vienna Sausage Sauerkraut Cheese/ Crackers Raisins Nuts
Juice or Milk →				V-8 Juice		
Corned Beef Hash Vegetable Pudding	Spaghetti w/meat balls Vegetables	Beef Stew Fruit	Chicken New Potatoes Vegetable	Spaghetti w/meat balls Vegetables	Hash Vegetable Pudding	Stew Fruit
Fruit Juice or Milk →						

FOOD GROUPS,

Food Groups, Recommended Servings Per Day:

Milk - 2 servings
Meat - 2 servings
Vegetables & Fruit - 4 servings
Bread & Cereal - 4 servings

S	M	T	W	TH	F	ST
Graham Crackers Milk Fruit Protein Bar	Cereal Milk Fruit Juice	Granola Milk Dried Fruit Juice	Brown Bread Cocoa Marsh-mallows Marj/ Jam	Graham Crackers Milk Fruit Protein Bar	Cereal Milk Fruit Juice	Granola Milk Dried Fruit Juice
Tuna w/ cream of mushroom Soup Crackers Fruit	Jerky Sticks Peanut Butter & Jelly on Cracker sand Chocolate Bar	Sliced Spam Baked Beans Vegetable Cookies	Vienna Sausage Sauerkraut Cheese/ Crackers Raisins Nuts	Tuna Fish W/soup on crackers Fruit	Spaghetti w/meat Balls Vegetable Cookies	Sardines on crackers & Cheese Protein Bar
					Milk	
Chicken New Potatoes Vegetables	Spaghetti w/meatBalls Vegetable	Beef Stew Fruit	Hash Vegetable Pudding	Chicken New Potatoes Vegetable	Spaghetti w/meat Balls Vegetable	Stew Fruit

HOW LONG

YOU MUST BE SELF SUFFICIENT DEPENDS UPON THE EMERGENCY..

And your ABILITY to COPE with adversity and change

3 DAY EVACUATION KIT

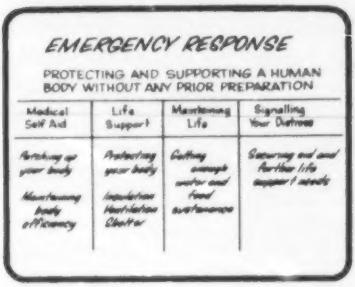
Use duffle bags, suitcases, back packs, or 5 gallon plastic buckets with sturdy handles.

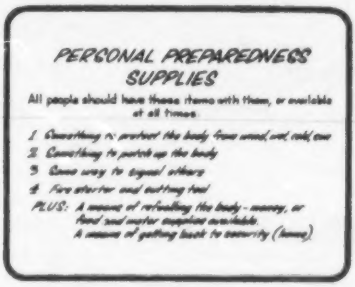
Non-perishables can be stored in your automobile:

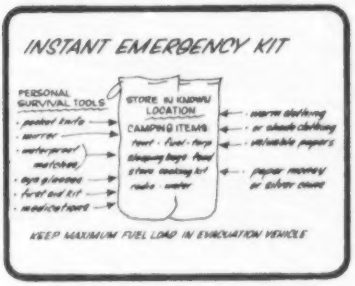
Food: Pack compact, non-perishable foods that require no cooking. Plus salt, vitamins, can opener, utensils, cooking tools, etc. Remember the special dietary needs of any family members, particularly infants or diabetics.

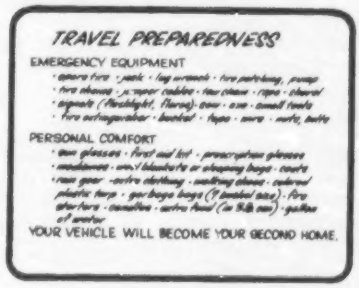
Water: Small filled containers, plus all available non-treated polyethylene trash bags, smaller plastic bags and pillow cases, water purifying material such as Clorox or iodine, a teaspoon for measuring and a siphoning hose.

Store your food and water reserves in an easily accessible location near an exit.




PERSONAL PREPAREDNESS SUPPLIES
All people should have these items with them, or available at all times
1. Something to protect the body from wind, wet, cold, sun
2. Something to patch up the body
3. Some way to signal others
4. Fire starter and cutting tool
PLUS: A means of refueling the body - money, or food and water supplies available.
A means of getting back to security (home)




TRAVEL PREPAREDNESS
EMERGENCY EQUIPMENT
spare tire · jack · lug wrench · tire patching, pump
tire chains · jumper cables · tow chain · rope · shovel
signals (flashlight, flares) · can · axe · small tools
fire extinguisher · bucket · tape · wire · nails, bolts
PERSONAL COMFORT
spare glasses · first aid kit · prescription glasses
medicines · wool blankets or sleeping bags · coats
rain gear · extra clothing · walking shoes · colored plastic tarp · garbage bags (3 packages) · fire starters · sanitary · extra food (at least one) · gallon of water
YOUR VEHICLE WILL BECOME YOUR SECOND HOME.

NOTE: Your family must be able to carry all items in one trip. Divide the kit up among family members according to strength and ability. Remember to store your evacuation supplies in manageable containers. Consider carefully the necessity of any article stored beyond your food and water.

BEST COPY AVAILABLE

AN OUTLINE FOR FAMILY EMERGENCY PLANNING

Public fallout shelter nearest our home is located at:

_____

The best route from our home to this shelter is:

_____

The location in our home that offers the best shelter protection is:

_____

Nearest shelter to work/school:

_____

Best route planned? _____

Is assistance needed to reach shelter? _____

Who will provide? _____

Family member responsible for:

Home shelter area water	_____
Home shelter area food	_____
Supplies to take to public shelter	_____
First aid and first aid kit	_____
Fire prevention and control	_____
Safe storage of vital family records	_____
Sanitation and sanitation supplies	_____
Maintenance of family shelter area	_____
Insure battery radio is available and working and spare batteries on hand	_____
Turn off burners, close windows, secure house (turn off utilities if told to do so)	_____
Secure area outside house	_____

Names of family members:

Training Courses

First Aid	_____
Medical Self Help	_____
Emergency Preparedness	_____
Survival	_____
Fire Fighting	_____

Names of Family Members (continued)

Special Responsibilities:

Family pets _____

Livestock _____

Farm equipment _____

Warn neighbors _____

Special personal needs: _____

Medicines _____

Foods _____

Infant supplies _____

Checklist of supplies for family shelter area:

_____Water _____Battery radio, spare batteries

_____Food _____Clothing

_____First aid kit, health and medical items _____Firefighting equipment

_____Sanitation items _____ _____

Items we plan to take to public shelter:

_____

_____

_____

_____

We can obtain additional planning information from:

Local Civil Defense or Emergency Services Agency Phone _____

Address _____

State Civil Defense or Emergency Services Agency Phone _____

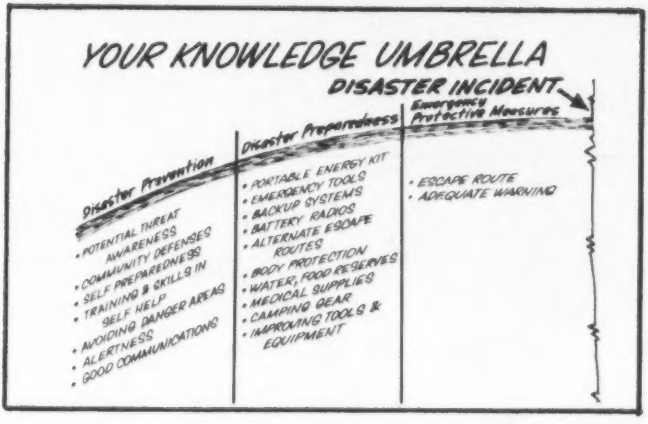
Address _____

County Agricultural Agent Telephone _____

Address _____

You may find yourself in a hostile environment and solely dependent upon your own resourcefulness.

YOUR KNOWLEDGE UMBRELLA



EMERGENCY RESPONSES

- ✓ PATCHING UP YOUR OWN BODY
- ✓ ESCAPING FURTHER THREATS
- ✓ PROTECTING WHAT YOU HAVE
- ✓ SIGNALLING YOUR DISTRESS
- ✓ EXTENDING LIFE LONG ENOUGH TO EFFECT SELF RESCUE

74 BEST COPY AVAILABLE

BIBLIOGRAPHY

Living Life's Emergencies, Patrick Lavalla and Robert Stoffel, Emergency Response Institute, 1981.

Emergencies Happen, Alberta Disaster Services, Alberta, Canada.

In Time of Emergency, Defense Civil Preparedness Agency, 1973.

Surviving The Unexpected Wilderness Emergency, Gene Fear, Survival Education Association, 1978.

Project Readiness: Guide to Family Emergency Preparedness, Louise Nelson, Horizon Publishers, 1980.

Notes on Home Preparedness and Food Storage, Jeri Berthoud Dedmon, Emergency Response Institute, 1981.

Survival Sense for Pilots, LaValla, Stoffel. 1981, Emergency Response Institute.

Emergency Preparedness Today, Stoffel, 1978. State of Washington Dept. Emergency Services.

Passport to Survival, Esther Dickey.

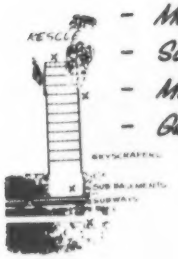
And a special thanks to Dr. Paul Green—Survival, Outdoor Manager, Emergency Preparedness Concepts of Eastern Washington University, Cheney, Washington.

DEFENSIVE LIVING...

DEVELOPS A PHILOSOPHY, OR WAY OF LIVING.

SELF-RESPONSIBILITY FOR ALWAYS

- *Reducing the risk factor*
- *Maintaining optimum body efficiency*
- *Solving the immediate threat problem*
- *Maintaining positive action*
- *Guarding personal comfort*



LOCATION OF IMPORTANT PAPERS

It is important to have valuable papers stored in a safe place, or at least, to be able to find them easily if they are not all in the same location. Listing the location of important papers and other valuables can help you or a relative find them if necessary.

List The Location Of The Various Following Papers:

Birth Certificate _____

Marriage License _____

Will _____

Life Insurance Policies _____

Accident and Health Policies _____

Stock Certificates, Bonds, etc. _____

_____

Copy of Mortgage or Lease _____

Deed To Home _____

Bill of Sale on, or Title to, Automobile _____

Tax Returns, Receipts or Cancelled Checks _____

Citizenship Papers, if Naturalized _____

Military Discharge Papers _____

Other Important Documents or Valuables _____

_____

Safe Deposit Box:

Address of Bank _____ Box No. ____

Name of Person Having Access to Box _____

Location of Keys _____

Banks:

Name and Address of Bank _____

MODERN SOCIETY

- *LIVES IN A CITY*
- *WORKS IN A CITY*
- *TRAVELS FAST across deserts, rivers, mountains, seas, weather zones and natural disasters.*
- *DEPENDS UPON modern service industries for supply of vital necessities, services.*
- *DEPENDS UPON governmental agencies for protection of life and property.*

It is not a question of WILL AN EMERGENCY OCCUR, IT IS A QUESTION OF WHEN WILL IT OCCUR.

Then the question becomes what will I be without that is necessary to prolong life and comfort.

To be prepared you must look ahead before every activity for those necessary items that are the tools and necessities for maintaining comfort and life during and after the event.

—By Gene Fear, Philosopher

BEST COPY AVAILABLE